Sets and Numbers

2

BY PATRICK SUPPES

Sets and Numbers

BOOK 2

BY PATRICK SUPPES

Consulting Editor — Robert E. K. Rourke

Illustrations by Garth Bell

To the Teacher: This is a text for second-grade mathematics. Detailed instructions are given in the Teacher's Edition.

Parts 1-6 review the concepts presented in the first grade.

Part 1 (pp. 1-13) Sets. The concepts of set, equal sets, and union of sets.

Part 2 (pp. 14-21) Number of Things in a set. The meaning of number introduced through the number of things in a set.

Part 3 (pp. 22-41) Adding Numbers. Addition of numbers presented by way of the pictorial N notation.

Part 4 (pp. 42-49) Tens and Ones. The place-value system.

Part 5 (pp. 50-53) Difference of Sets. The concrete analogue of subtractions of numbers.

Part 6 (pp. 54-75) Subtraction. Use of the pictorial N notation as a means to understand subtraction.

Part 7 (pp. 76-101) Numbers 11-19. The number line; sums and differences; telling time; and counting money.

Part 8 (pp. 102-123) Hundreds, Tens and Ones. Extension of the place-value notation.

Part 9 (pp. 124-139) Subsets. The subset as the foundation for "less than."

Part 10 (pp. 140-160) Less Than. The concept of less than developed from subset to N notation to Arabic numerals.

Part 11 (pp. 161-173) Finding Sets. Learning to write the mathematical notation of a set defined by a property or properties.

Part 12 (pp. 174-189) Geometry. An intuitive approach to geometrical concepts of line segments and closed figures.

Part 13 (pp. 190-201) Fractions. The use of 1/2, 1/3, and 1/4 as parts of a figure and as parts of groups of things.

Part 14 (pp. 202-217) Regrouping in Addition. Application of regrouping principles for addition of larger numbers.

Part 15 (pp. 218-231) Regrouping in Subtraction. Applying the regrouping process to subtraction.

Part 16 (pp. 232-253) Word Problems and Equations. The translation of word problems into simple equations.

Part 17 (pp. 254-262) More Geometry. The meaning of convex and concave figures; the perimeter of geometric figures.

Part 18 (pp. 263-289) Multiplication. Using sets to develop an understanding of multiplication.

Part 19 (pp. 290-297) Area. Visual representation of the multiplication operation presented through the study of area.

Part 20 (pp. 298-303) Intersection of Sets. The operation of intersection of sets.

Part 21 (pp. 304-320) Using Numbers. The review and extension of applications for measures, telling time, and money.

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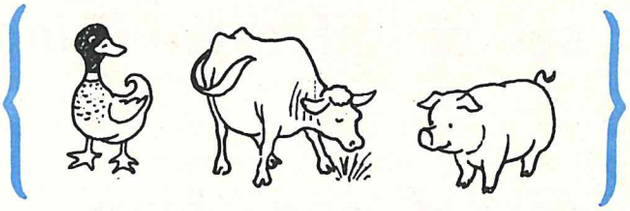
Part 1 Sets

#1 6 oc

This is a set of a duck, a cow and a pig.



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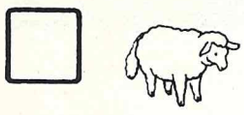
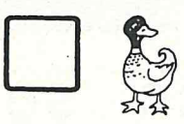
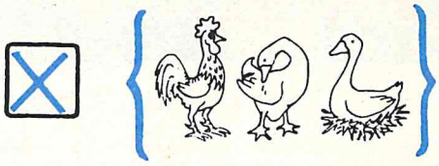
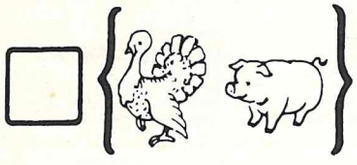
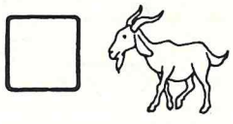
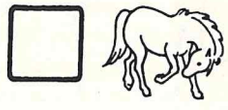


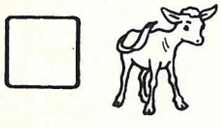


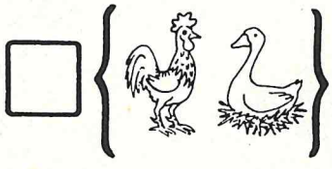


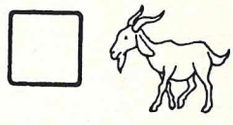


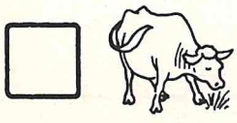


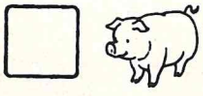


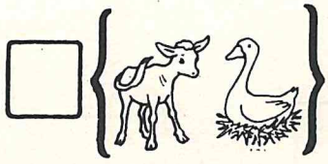












Sets

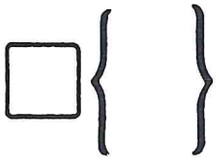
A set of the same kind of things

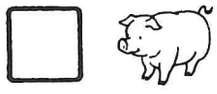
A set of different kinds of things

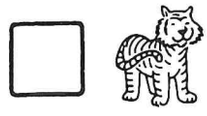
A set of one thing

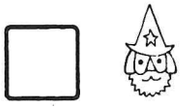
{ } The empty set

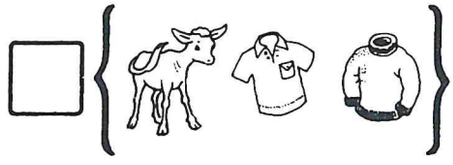
☒ each set.

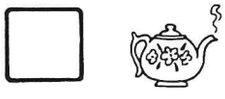


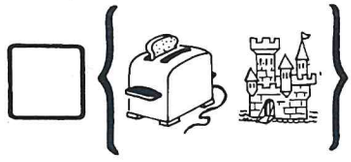


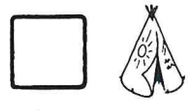












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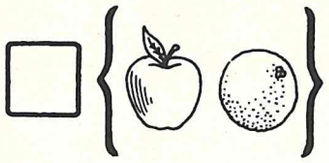
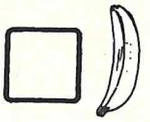
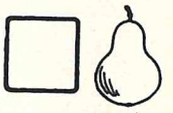
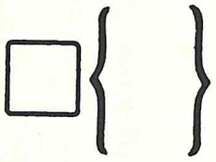
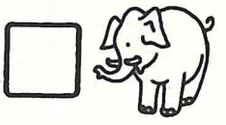
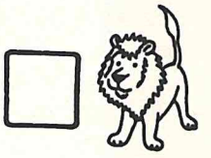


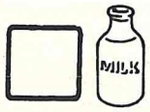


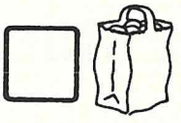


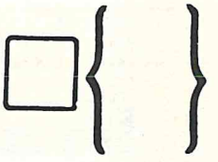


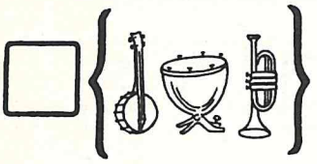


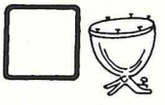


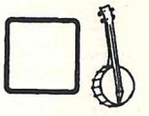


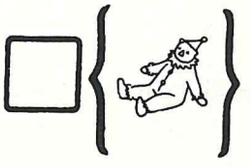


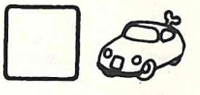


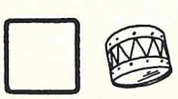


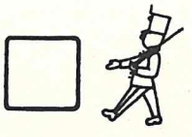


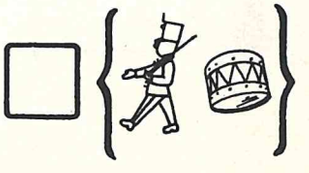




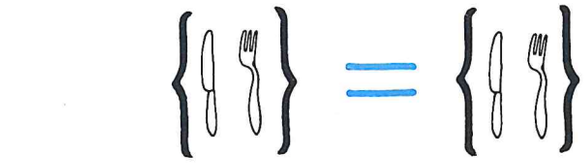








Equal sets



Sets are equal when they have the same things in them.

☒ the equal sets.

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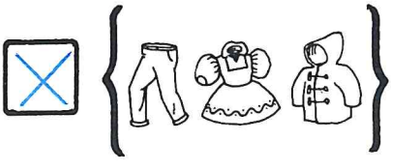
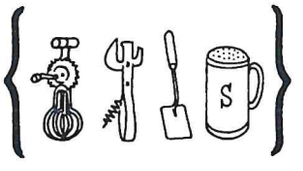
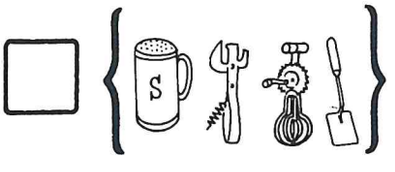
☒ 

 = ...

☐ 

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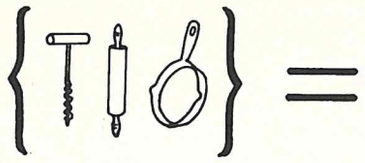
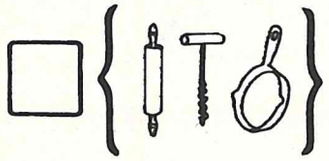
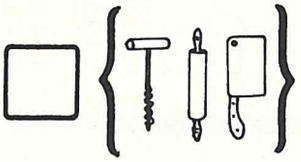
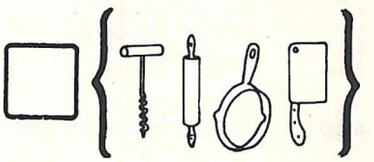
☒ the equal sets.

 = ...

☐  ☐  ☐ 

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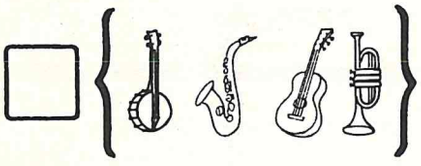
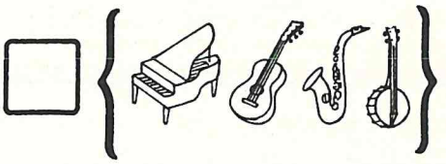
☐  ☐  ☐ { }

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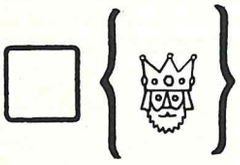
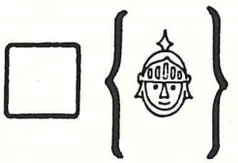
☐  ☐  ☐ { }

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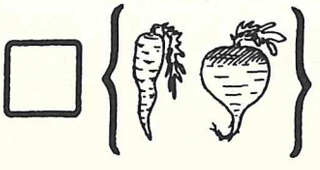
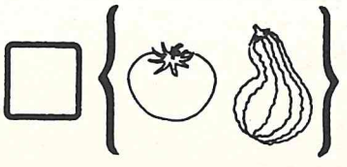
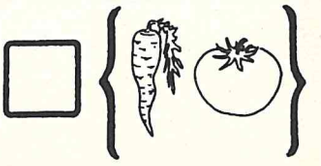
☐  ☐  ☐ 

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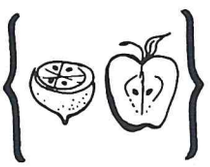
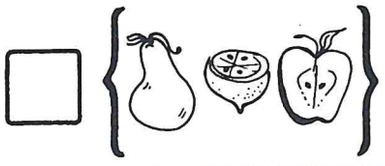
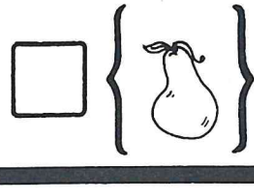
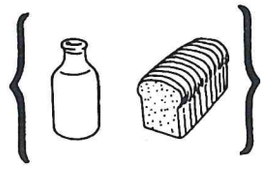
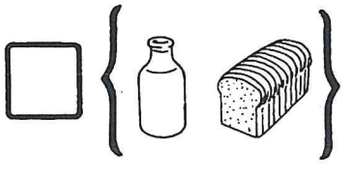
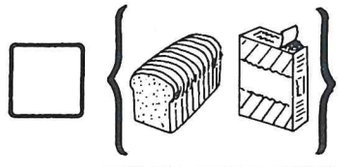
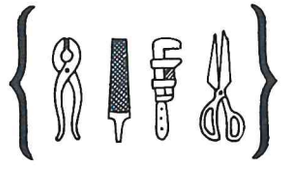
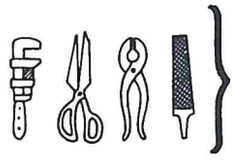
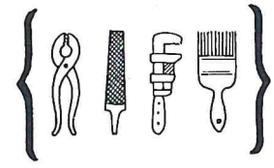
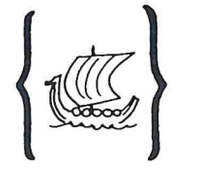
☐  ☐  ☐ 

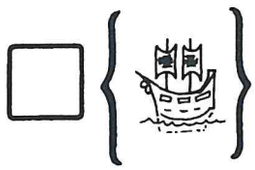
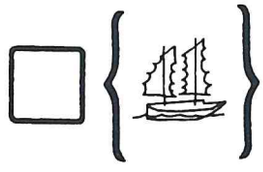
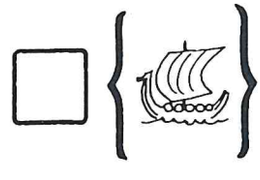
 = ...

☐ ☐  ☐ 

 = ...

☐  ☐ ☐ 

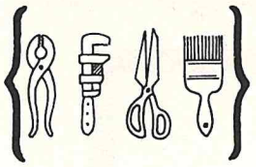
 = ...

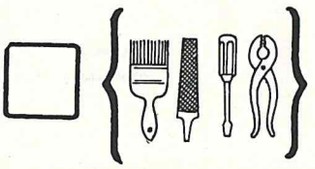
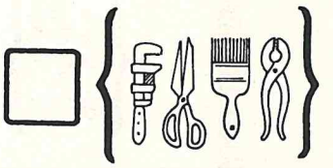
☐  ☐  ☐ 

A collection of things

is called a _____

☒ the equal sets.

 = ...

☐ ☐  ☐ 

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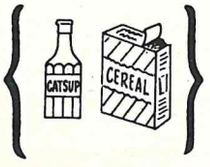
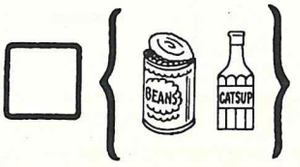
☐  ☐  ☐

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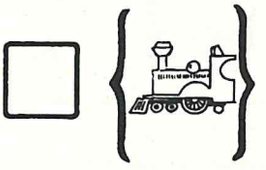
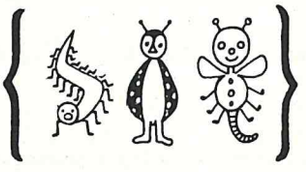
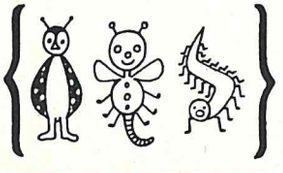
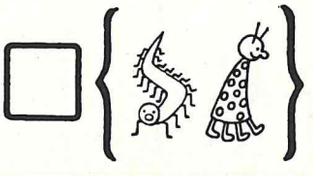
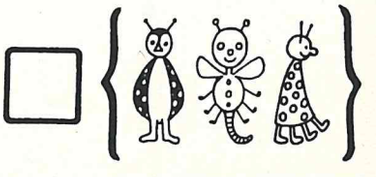
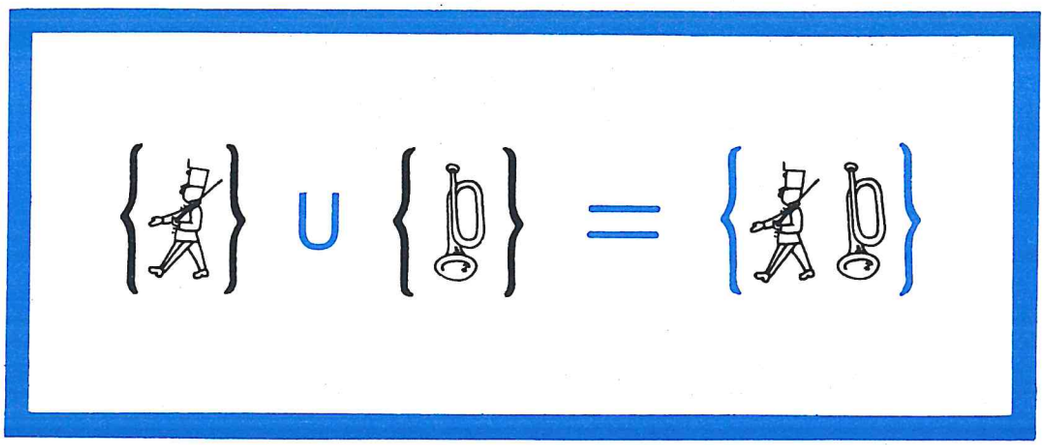
☐ ☐  ☐ { }

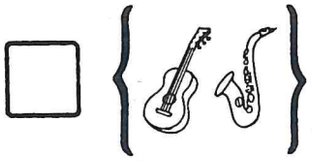
 = ...

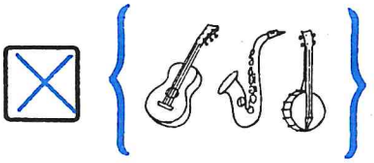
☐  ☐  ☐ 

When two sets have the same things in them, they are called _____ sets.

Union of sets: Putting sets together



☐ 

☒ 

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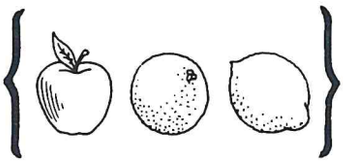
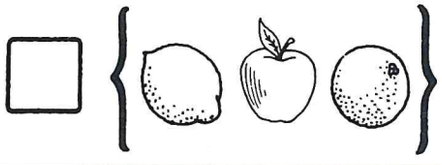
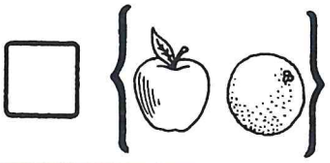
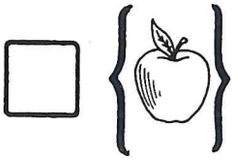


☐ 

☐ 

☐ 

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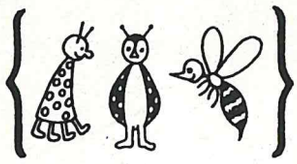
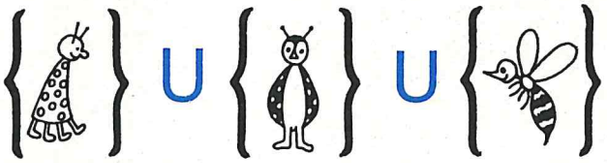
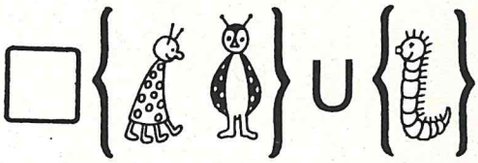
 = ...

□ 

□ 

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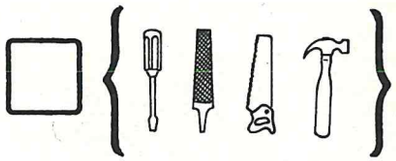
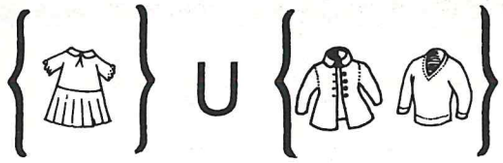
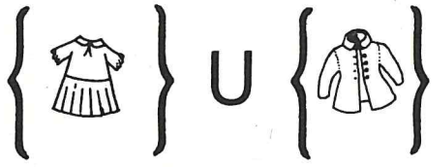
□ 

 = ...

□ 

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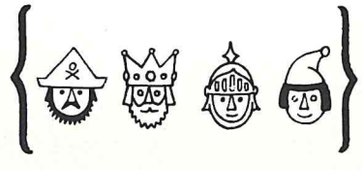
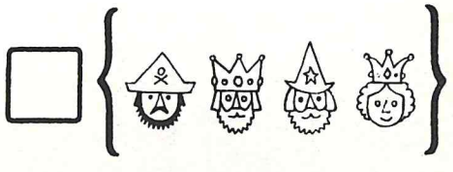
□ 

□ 

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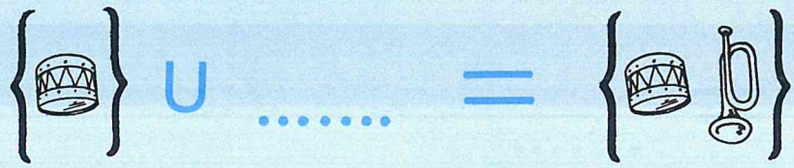
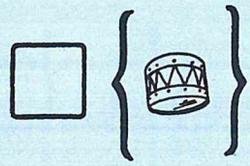
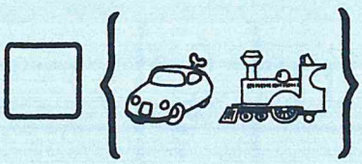
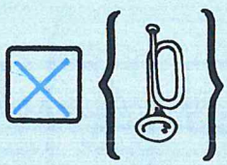
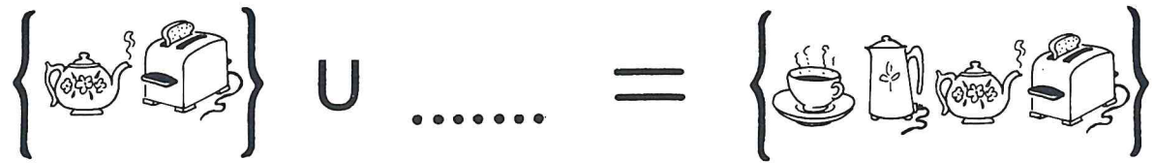
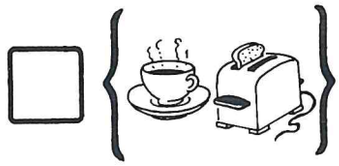


☐ 

☐ 

☒ 



☐ 

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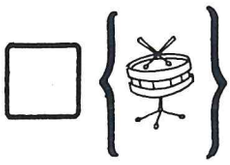
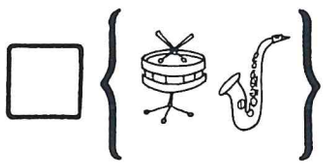
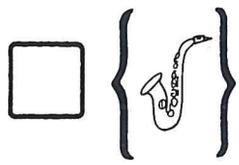
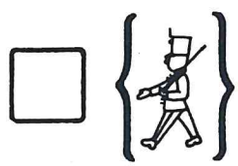
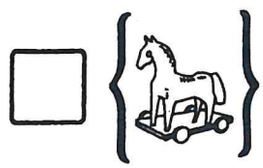
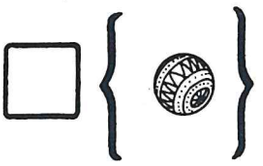
☐ 

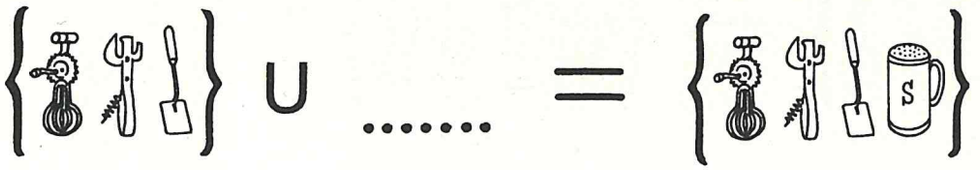
☐ 

☐ 

☐ 

☐ 

☐ 



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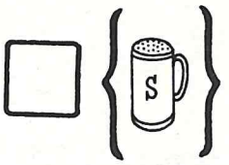
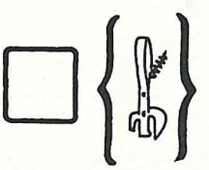
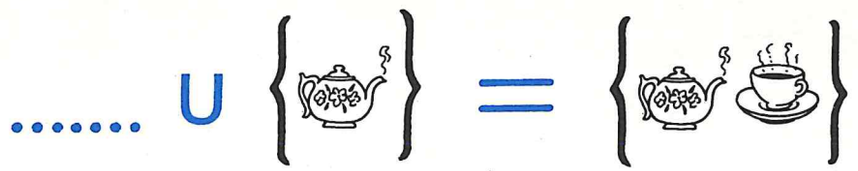
☐ 

☐ 



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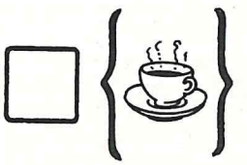
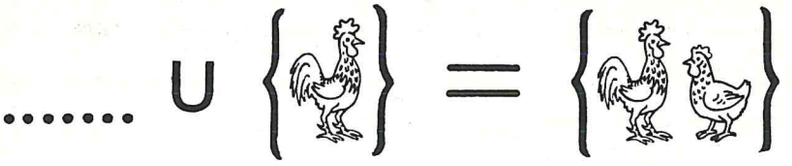
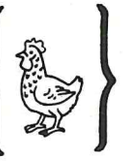
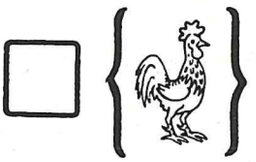
☐ 



☐ 

☐ 

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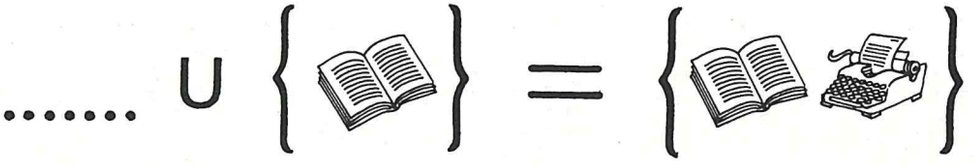

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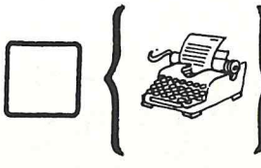
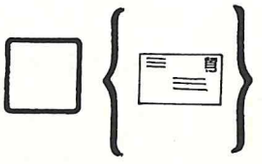
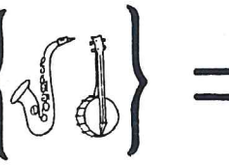
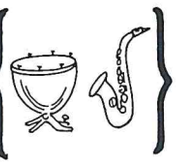
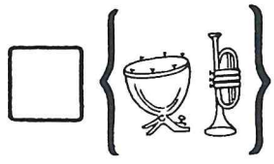
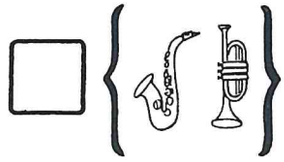
☐ 

☐ 

..... ∪ {  } = { }

□{  } □{  } □{  }

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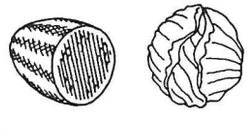
{  } ∪ ..... = { }

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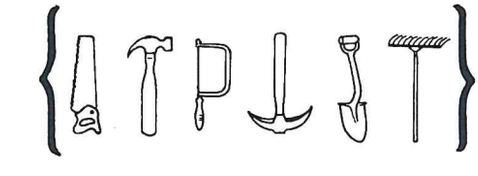
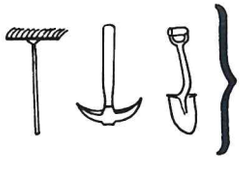
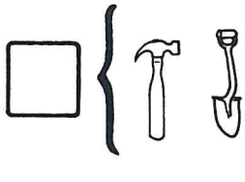
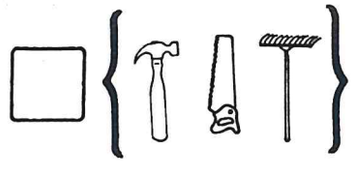
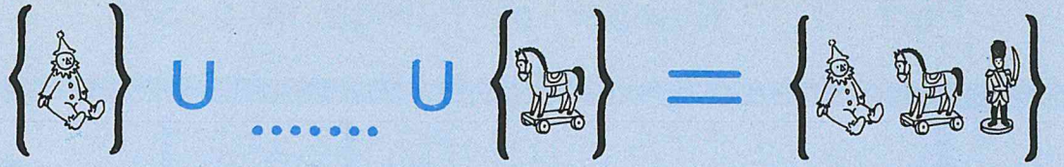
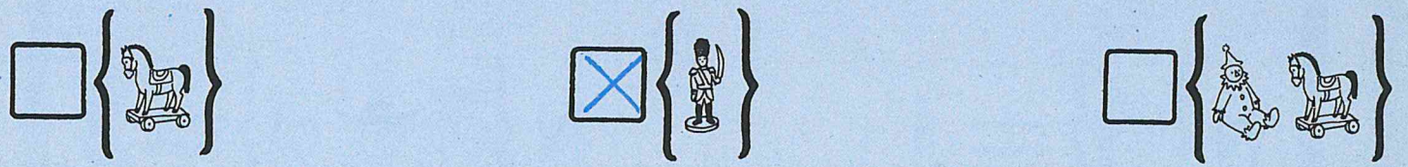
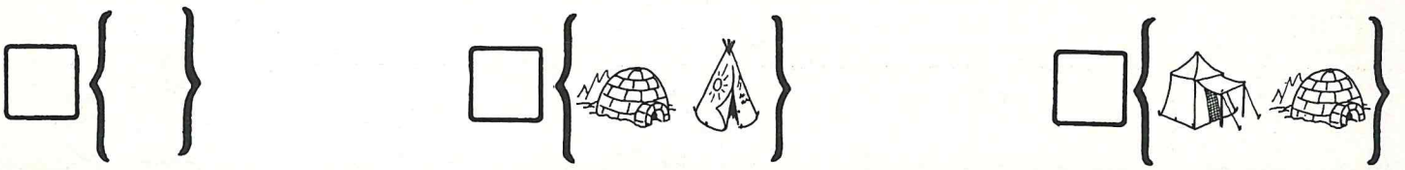
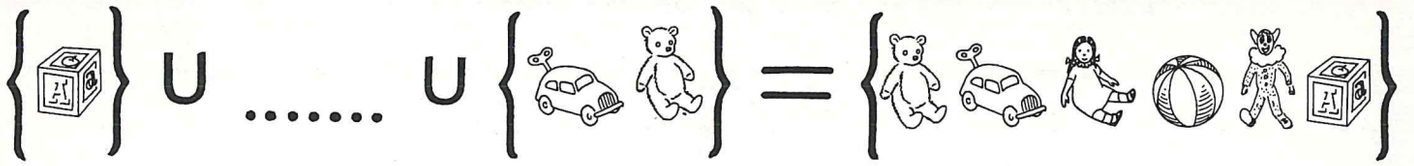
..... ∪ { } = {  }

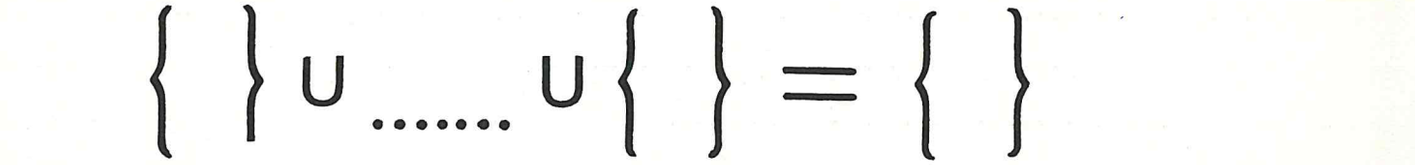
□{  } □{  } □{  }

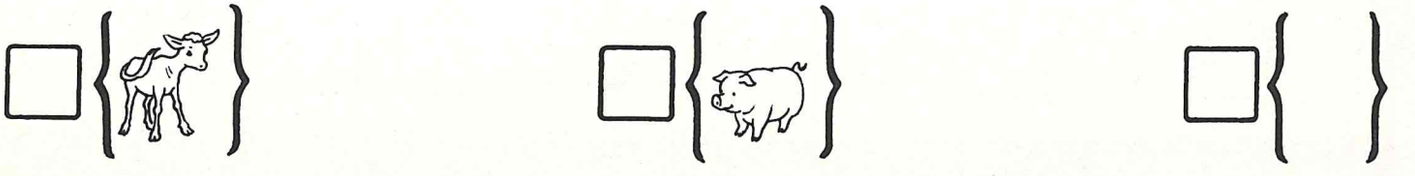






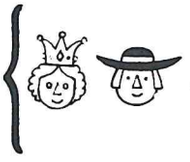






Part 2 Number of Things in a Set

$N\{\ \} = 0$ $N\{$ $\} = 2$

$N\{$ $\} = 1$ $N\{$  $\} = 3$

$N\{$ $\} =$ .....

☐1 ☐2 ☒3 ☐4 ☐5

$N\{$ $\} =$ .....

☐1 ☐2 ☐3 ☐4 ☐5

$N\{$ $\} =$ .....

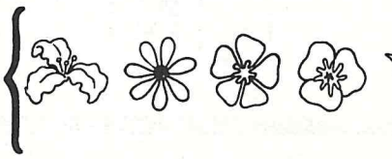
☐4 ☐5 ☐6 ☐7 ☐8

N{ } = ...

☐5 ☐6 ☐7 ☐8 ☐9

N{ } = ...

☐0 ☐1 ☐2 ☐3 ☐4

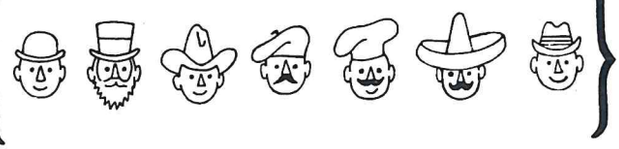
N{  } = ...

☐2 ☐3 ☐4 ☐5 ☐6

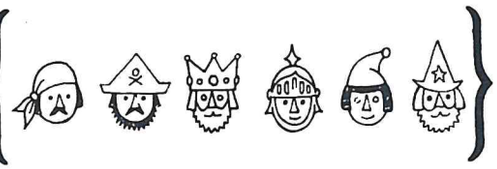
N{ } = ...

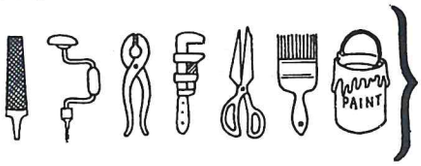
☐0 ☐1 ☐2 ☐3 ☐4

Numbers tell you how many things are in sets.

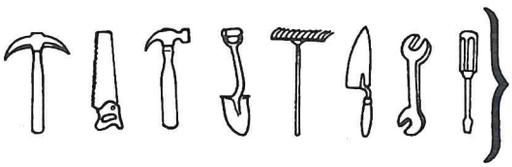
□N {  }

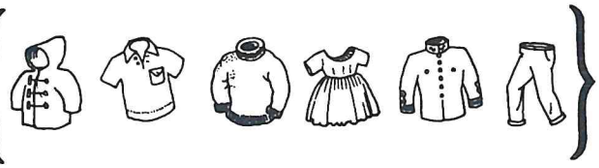
6 = ...

□N {  }

□N {  }

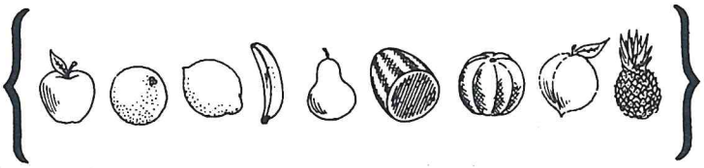
7 = ...

□N {  }

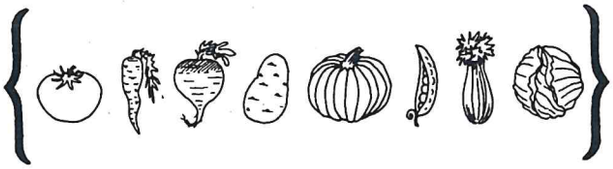
□N {  }

5 = ...

□N { }

□N {  }

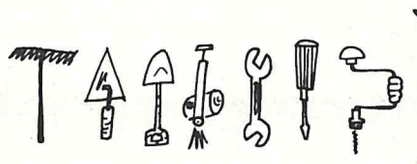
8 = ...

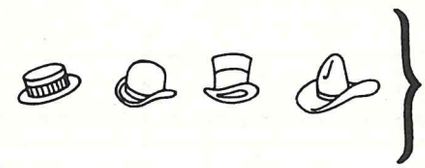
□N {  }

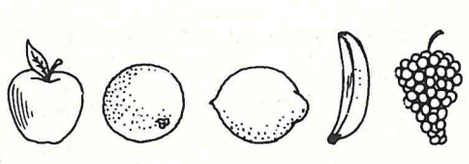
N{ } = 2

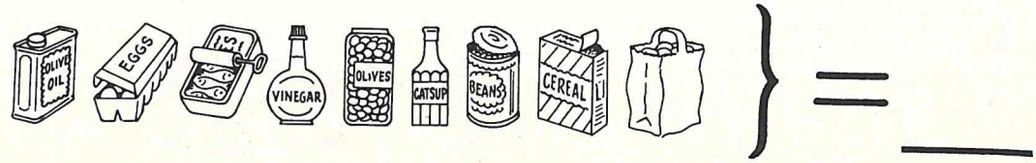
N{ } = ___

N{ } = ___

N{  } = ___

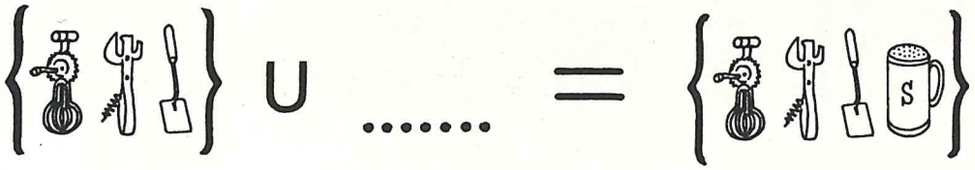
N{  } = ___

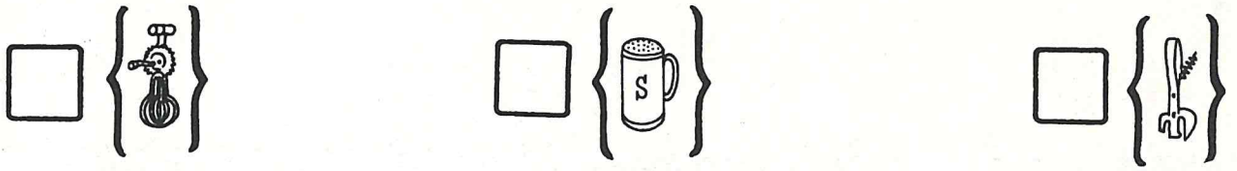
N{  } = ___

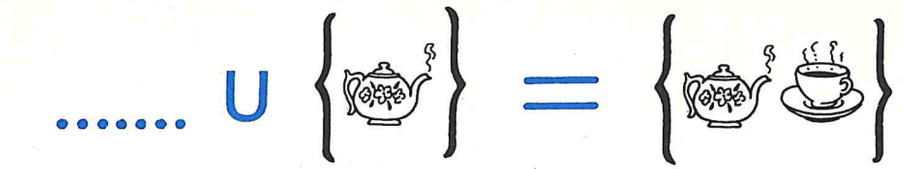
N{  } = ___

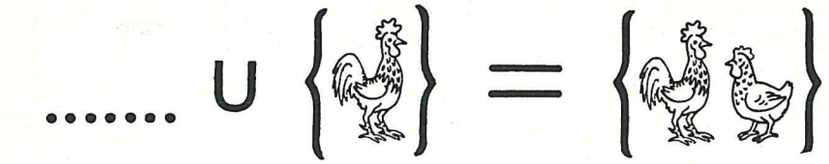
Finish each row

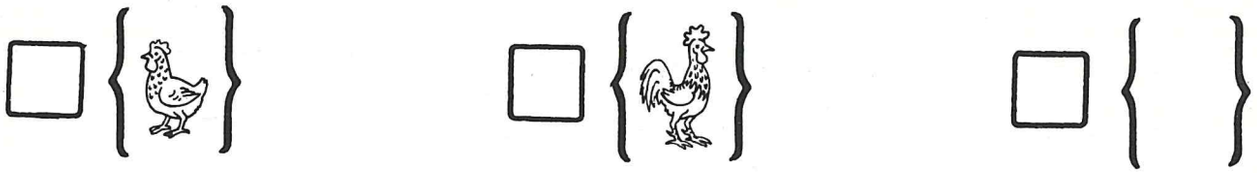
1	2	3	___
3	___	___	6
2	3	___	___
___	1	___	3
___	___	___	9











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□ {🥁 🎸} □ {🥁 🎺} □ {🎸 🎺}

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□ {🖌} □ {PAINT} □ { }

{🥥 🥬} ∪ ..... = {🥥 🎃 🥬}

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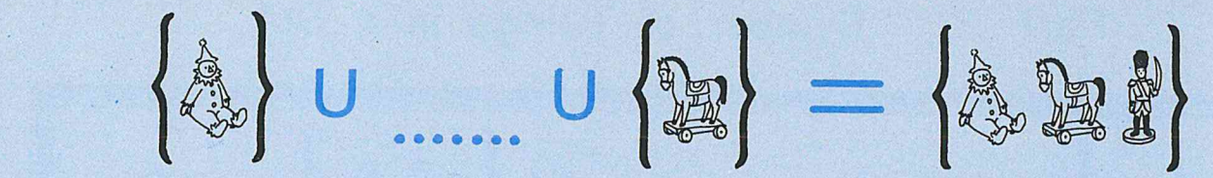
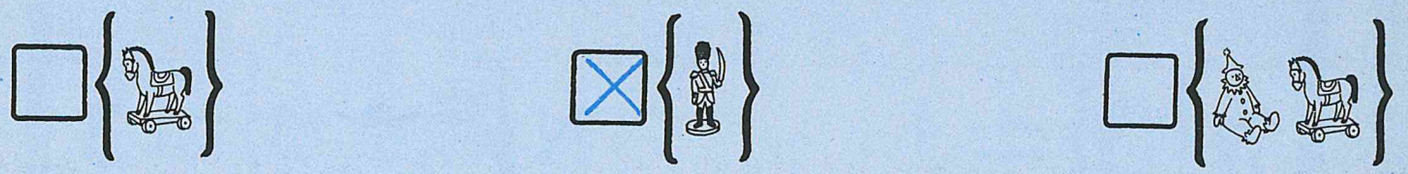
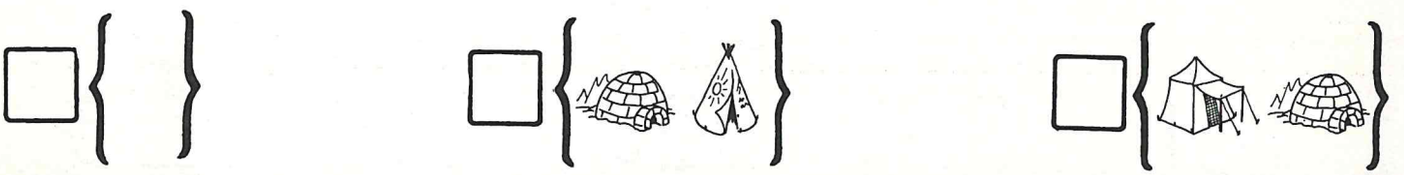
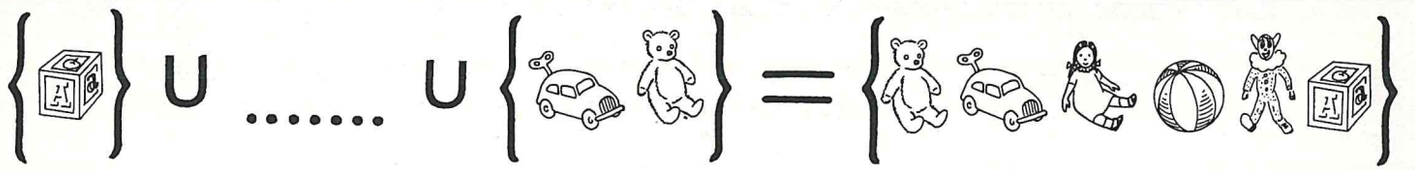
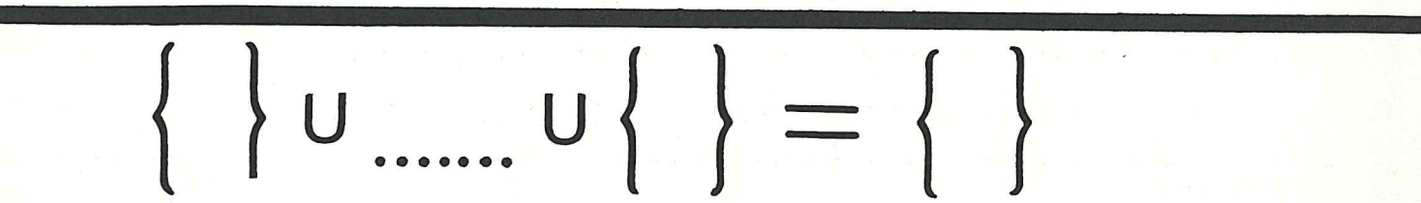
□ {⛏ 🪓 🧹} □ {⛏ 🧹} □ {⛏ 🔨 ⛏}

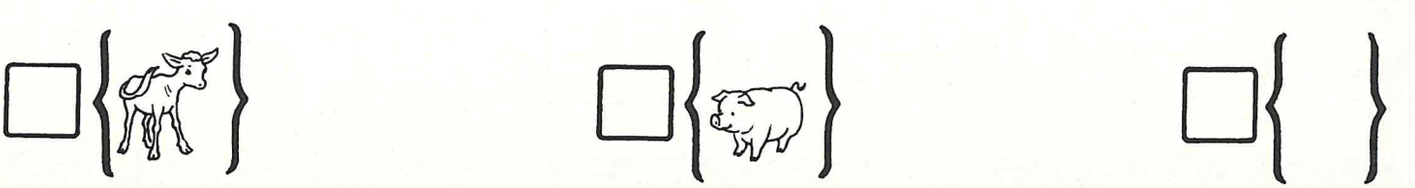






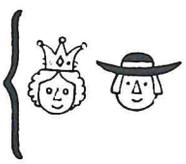






Part 2 Number of Things in a Set

$N\{\ \} = 0$ $N\{$ $\} = 2$

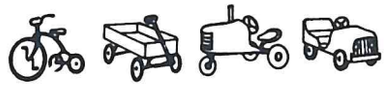
$N\{$ $\} = 1$ $N\{$  $\} = 3$

$N\{$ $\} =$ .....

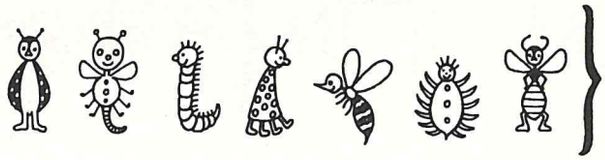
☐1 ☐2 ☒3 ☐4 ☐5

$N\{$ $\} =$ .....

☐1 ☐2 ☐3 ☐4 ☐5

$N\{$  $\} =$ .....

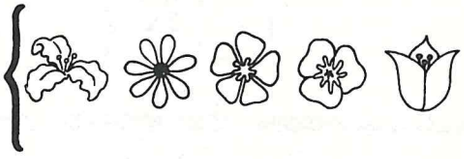
☐4 ☐5 ☐6 ☐7 ☐8

N{  } = ...

☐5 ☐6 ☐7 ☐8 ☐9

N{ } = ...

☐0 ☐1 ☐2 ☐3 ☐4

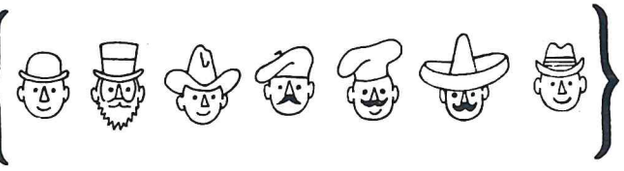
N{  } = ...

☐2 ☐3 ☐4 ☐5 ☐6

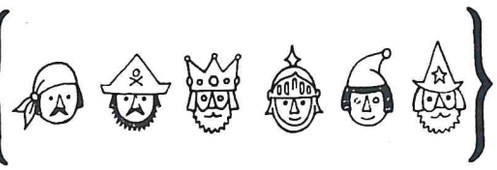
N{ } = ...

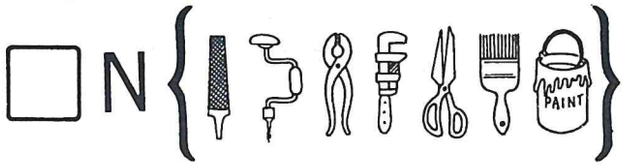
☐0 ☐1 ☐2 ☐3 ☐4

Numbers tell you how many things are in sets.

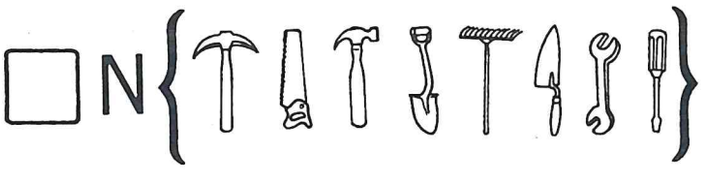
□N 

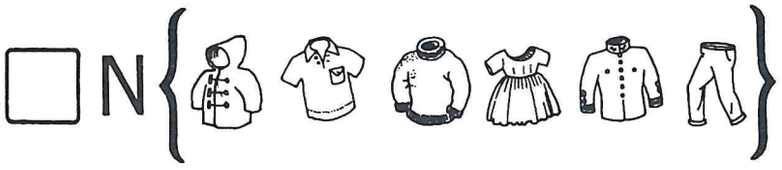
6 = ...

□N 

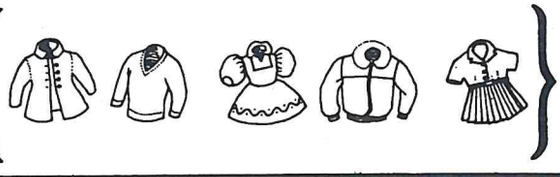
□N 

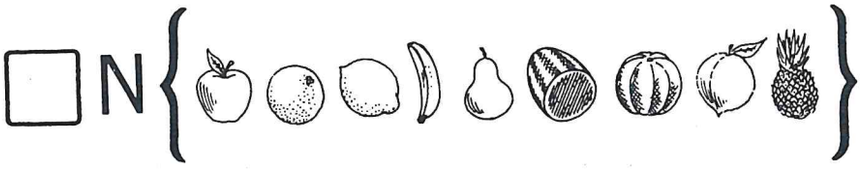
7 = ...

□N 

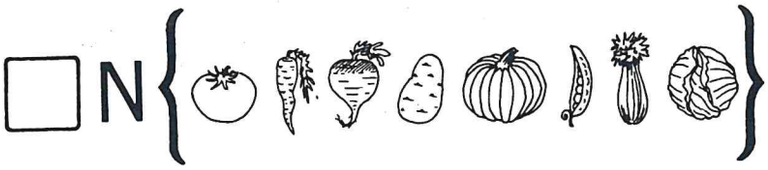
□N 

5 = ...

□N 

□N 

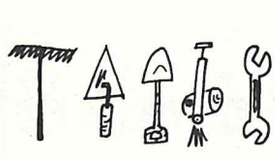
8 = ...

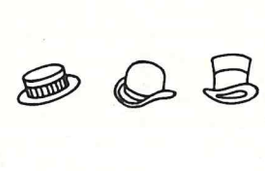
□N 

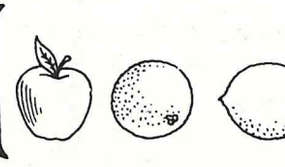
N{ } = 2

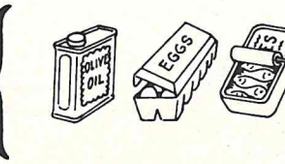
N{ } = ___

N{ } = ___

N{  } = ___

N{  } = ___

N{  } = ___

N{  } = ___

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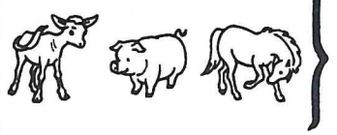
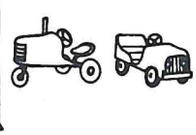
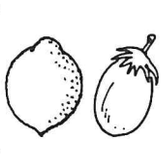
N{  } = ___

N{  } = ___

N{  } = ___

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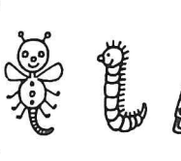
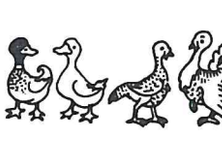
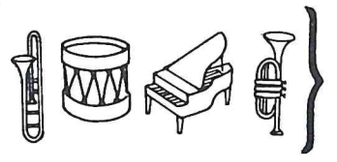
N{  } = ___

N{  } = ___

N{  } = ___

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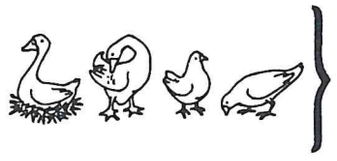
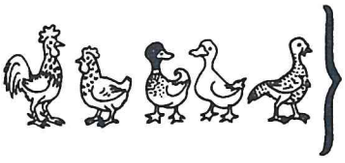
N{  } = ___

N{  } = ___

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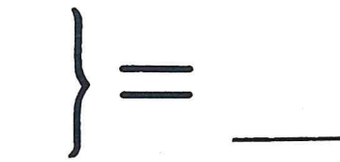
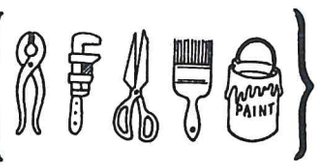
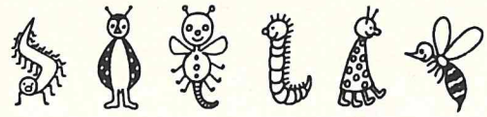
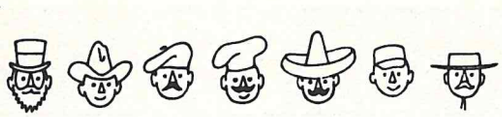
N{  } = ___

N{  } = ___

N{ } = ___

N{ } = ___

N{  } = ___

N{  } = ___

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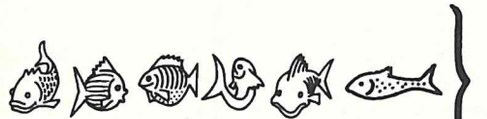
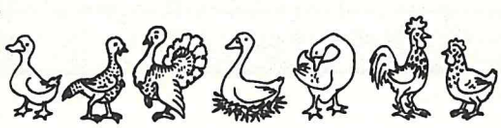
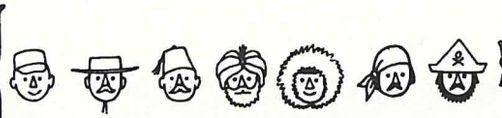
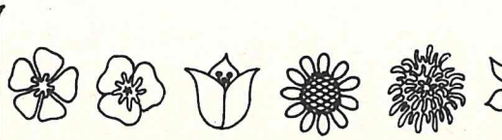
N{  } = ___

N{  } = ___

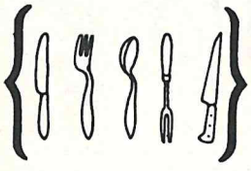
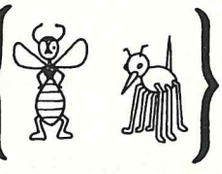
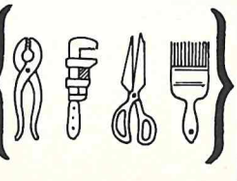
N{  } = ___

N{  } = ___

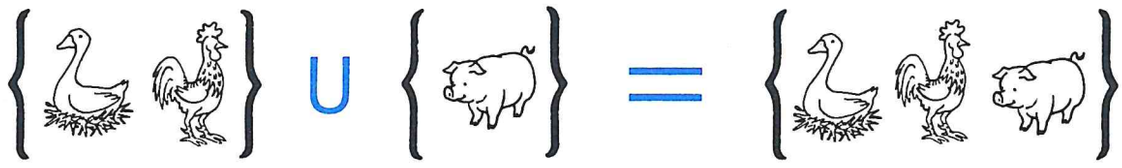
Finish each row

1	2	3	___
3	___	___	6
2	3	___	___
___	1	___	3
___	___	___	9

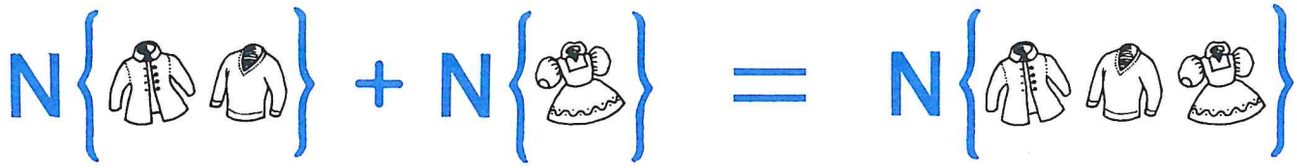
Finish each row

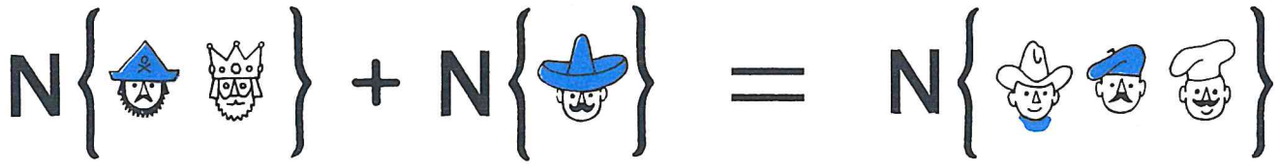
0	N	N	3
N			N
N 		7	
		N 	
	N 		6

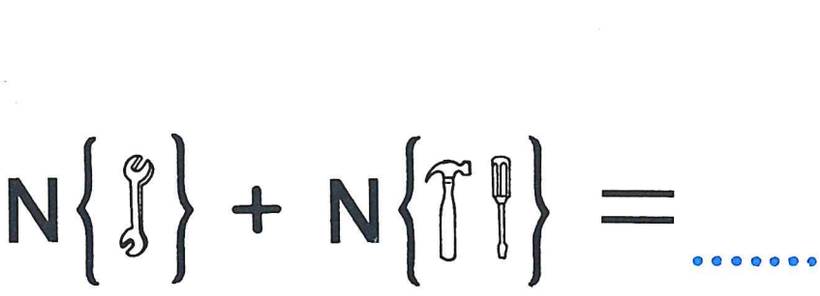
Putting sets together.

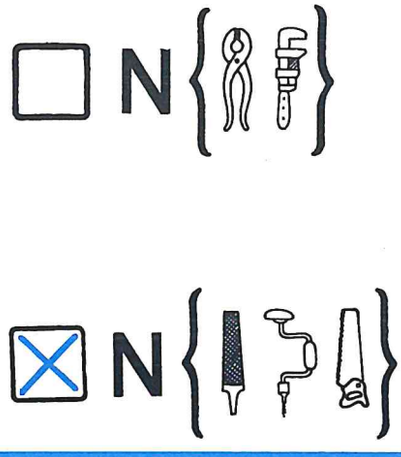


Adding numbers.

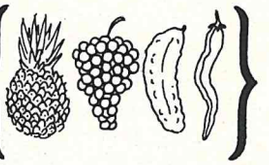


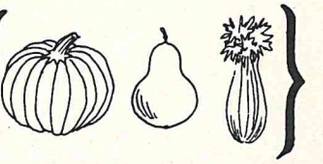


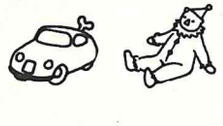




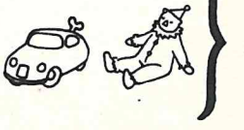
N{ } + N{ } = ...

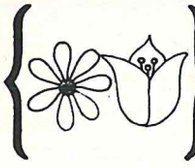
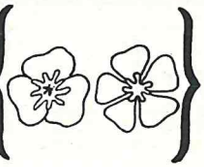
□ N{  }

□ N{  }

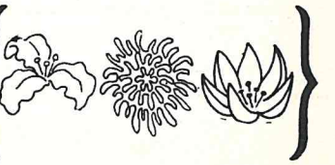
N{  } + N{ } = ...

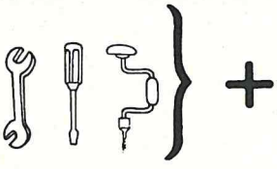
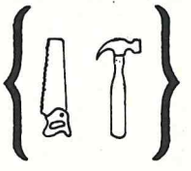
□ N{ }

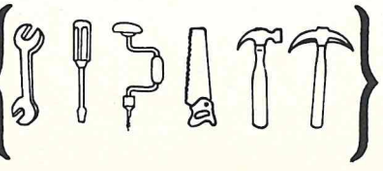
□ N{  }

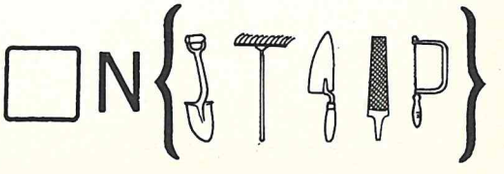
N{  } + N{  } = ...

□ N{ }

□ N{  }

N{  } + N{  } = ...

□ N{  }

□ N{  }

N{ } + N{ } = 3

1 + 2 = 3

N{ } + N{ } = _____

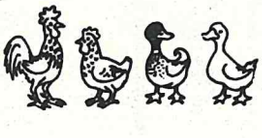
_____ + _____ = _____

N{ } + N{ } = _____

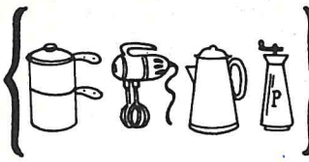
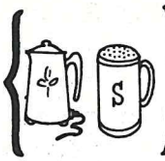
_____ + _____ = _____

N{ } + N{ } = _____

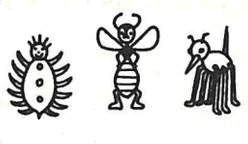
_____ + _____ = _____

N{ } + N{  } = _____

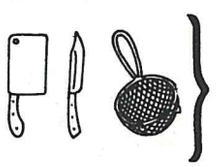
_____ + _____ = _____

N{  } + N{  } = _____

_____ + _____ = _____

N{ } + N{  } = _____

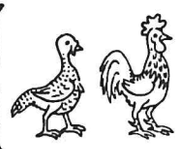
_____ + _____ = _____

N{ } + N{  } = _____

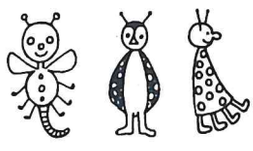
_____ + _____ = _____

N{ } + N{ } + N{ } = 3

2 + 1 + 0 = ___

N{ } + N{ } + N{  } = ___

___ + ___ + ___ = ___

N{  } + N{ } + N{ } = ___

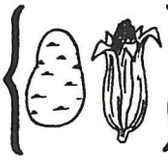
___ + ___ + ___ = ___

N{ } + N{ } + N{ } = ___

___ + ___ + ___ = ___

N{ } + N{ } + N{ } = ___

___ + ___ + ___ = ___

N{ } + N{  } + N{ } = ___

___ + ___ + ___ = ___

N{ } + N{ } + N{ } = ___

___ + ___ + ___ = ___

N{ } + N{ } + N{ } = ___

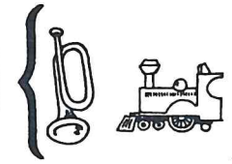
___ + ___ + ___ = ___

N{ } + N{ } = ___

N{ } + N{ } = ___

N{ } + N{ } = ___

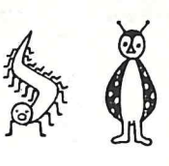
N{ } + N{ } = ___

N{  } + N{ } = ___

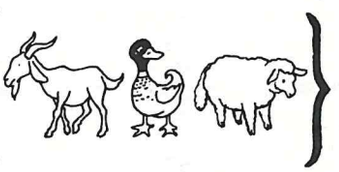
N{ } + N{ } = ___

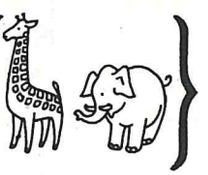
N{ } + N{ } = ___

1 + N{ } = 2

1 + N{  } = ___

2 + N{ } = ___

1 + N{  } = ___

0 + N{  } = ___

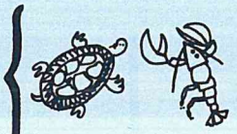
N{ } + 0 = ___

N{ } + 2 = ___

N{ } + 3 = ___

1 + 2 = 3	4 + 4 = ___
3 + 1 = ___	0 + 7 = ___
0 + 2 = ___	4 + 3 = ___
1 + 6 = ___	2 + 6 = ___
2 + 3 = ___	5 + 4 = ___
2 + 5 = ___	3 + 6 = ___
5 + 3 = ___	0 + 0 = ___

$\begin{array}{r} 1 \\ +\ 1 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +\ 2 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ +\ 1 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ +\ 1 \\ \hline \end{array}$
$\begin{array}{r} 2 \\ +\ 2 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ +\ 2 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +\ 4 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +\ 3 \\ \hline \end{array}$
$\begin{array}{r} 2 \\ +\ 3 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +\ 5 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ +\ 2 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ +\ 3 \\ \hline \end{array}$
$\begin{array}{r} 2 \\ +\ 4 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ +\ 4 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ +\ 3 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ +\ 4 \\ \hline \end{array}$

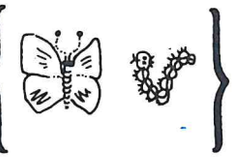
N{ } + ... = N{  }

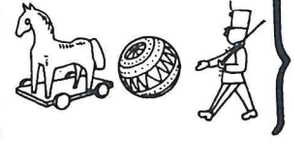
☐ N{ } ☒ N{ } ☐ N{ }

N{ } + ... = N{ }

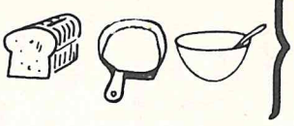
☐ N{ } ☐ N{ } ☐ N{ }

N{ } + ... = N{ }

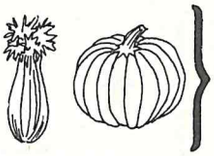
☐ N{ } ☐ N{ } ☐ N{  }

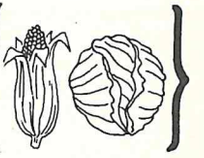
N{ } + ... = N{  }

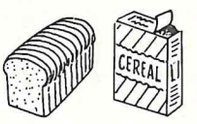
☐ N{ } ☐ N{ }

..... + N{ } = N{  }

□N{ } □N{ } □N{ }

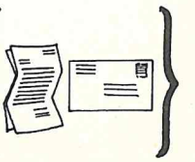
..... + N{ } = N{  }

□N{ } □N{ } □N{  }

..... + N{ } = N{  }

□N{ } □N{ } □N{ }

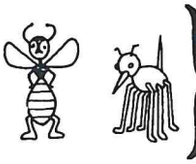
..... + N{ } = N{ }

□N{ } □N{} □N{  }

N{ } + ... = N{ }

☒ 1

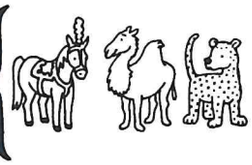
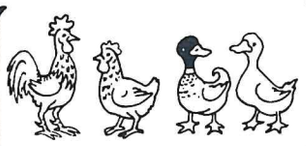
☐ 0 ☐ 2

N{ } + ... = N{  }

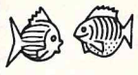
☐ 0 ☐ 1 ☐ 2

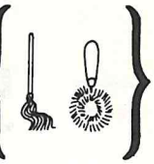
..... + N{ } = N{ }

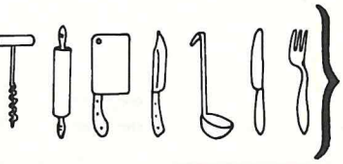
☐ 0 ☐ 1 ☐ 2

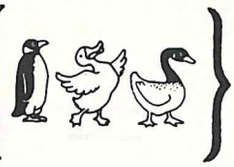
N{  } + ... = N{  }

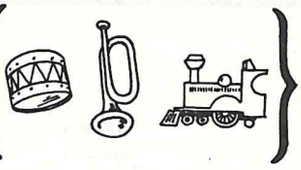
☐ 0 ☐ 1 ☐ 2

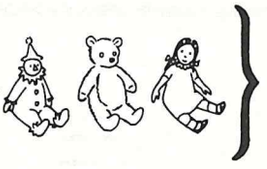
1 + ___ = N {  }

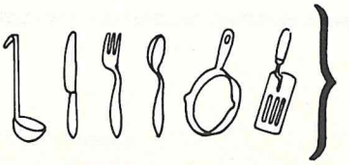
2 + ___ = N {  }

4 + ___ = N {  }

___ + 2 = N {  }

___ + 3 = N {  }

___ + 0 = N {  }

3 + ___ = N {  }

1 + 2 = 3	2 + 2 = 4
2 + ___ = 5	___ + 0 = 1
0 + ___ = 4	___ + 1 = 5
5 + ___ = 6	___ + 3 = 4
4 + ___ = 6	___ + 0 = 0
0 + ___ = 0	___ + 4 = 6
3 + ___ = 3	___ + 3 = 6

1 + 3 = ___	3 + 1 = ___
2 + ___ = 4	3 + ___ = 6
3 + 2 = ___	2 + 4 = ___
___ + 1 = 2	___ + 5 = 6
2 + 1 = ___	3 + 3 = ___
1 + ___ = 1	5 + ___ = 5
4 + 1 = ___	4 + 2 = ___

1 + 1 = m m = 2	5 + 1 = m m = ___
1 + 2 = m m = ___	1 + 6 = m m = ___
2 + 2 = m m = ___	3 + 3 = m m = ___
2 + 3 = m m = ___	5 + 0 = m m = ___
0 + 4 = m m = ___	4 + 2 = m m = ___

$1 + m = 2$ $m = 1$	$m + 1 = 2$ $m = 1$
$3 + m = 3$ $m = ___$	$m + 0 = 0$ $m = ___$
$2 + m = 4$ $m = ___$	$3 + m = 6$ $m = ___$
$0 + m = 3$ $m = ___$	$m + 4 = 5$ $m = ___$
$4 + m = 7$ $m = ___$	$m + 2 = 4$ $m = ___$

$1 + 1 = 2 + \underline{0}$

$2 + 1 = 1 + \underline{\quad}$

$2 + 0 = 1 + \underline{\quad}$

$3 + 1 = 1 + \underline{\quad}$

$1 + 2 = 0 + \underline{\quad}$

$2 + 2 = 2 + \underline{\quad}$

$2 + 2 = 1 + \underline{\quad}$

$4 + 1 = 3 + \underline{\quad}$

$4 + 2 = 3 + ___$

$3 + ___ = 2 + 2$

$2 + ___ = 1 + 1$

$0 + ___ = 3 + 2$

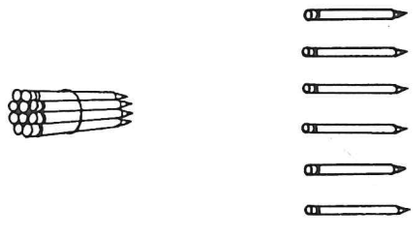
$5 + ___ = 3 + 3$

$6 + 2 = 8 + ___$

$4 + 3 = 3 + ___$

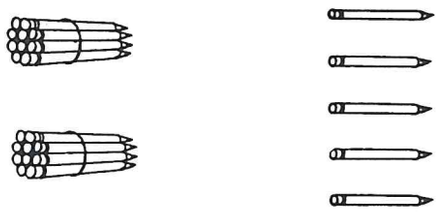
$5 + 3 = 4 + ___$

Part 4 Tens and Ones



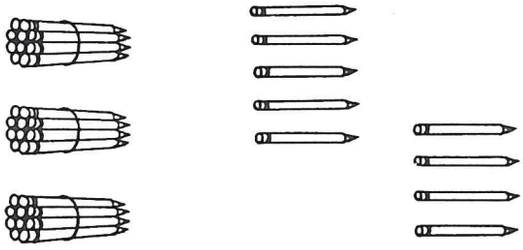
1 ten 6 ones

16 in all



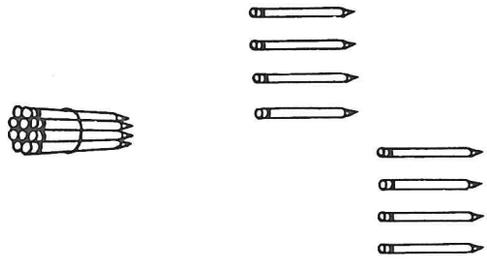
____ tens ____ ones

_____ in all



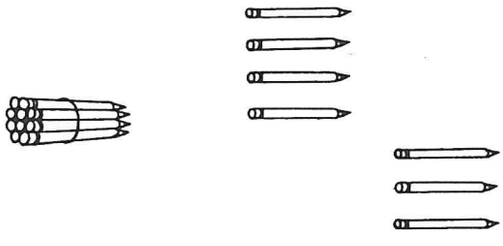
____ tens ____ ones

_____ in all



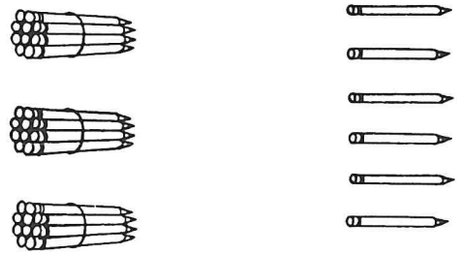
____ ten ____ ones

_____ in all



____ ten ____ ones

_____ in all



____ tens ____ ones

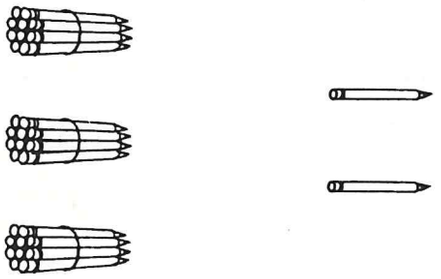
_____ in all

____ tens ____ ones

_____ in all

____ ten ____ ones

_____ in all



____ tens ____ ones

_____ in all

____ tens ____ ones

_____ in all

15 is 1 ten and 5 ones

23 is _____ tens and _____ ones

31 is _____ tens and _____ one

$10 + 10 = 20$

2 tens $= 20$

$10 + 10 + 10 =$ ____

____ tens $=$ ____

$10 + 0 =$ ____

____ ten $=$ ____

$10 + 10 + 10 + 10 =$ ____

____ tens $=$ ____

$10 + 10 + 10 + 10 + 10 =$ ____

____ tens $=$ ____

30 + 7 = 37.

3 tens and 7 ones are 37.

10 + 3 = _____.

_____ ten and _____ ones are _____.

20 + 0 = _____.

_____ tens and _____ ones are _____.

30 + 6 = _____.

_____ tens and _____ ones are _____.

40 + 1 = _____.

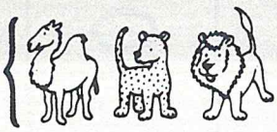
_____ tens and _____ one are _____.

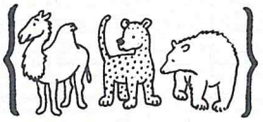
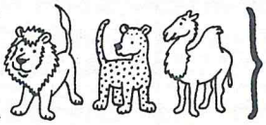
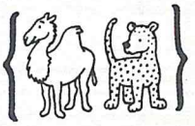
10 10 10 1 1 1 33	10 10 1 1 1	10 10 10 10	1 1 1 1 1
10 10 1 1	10 10 4	10 10 10 5	10 10 10 10 3
10 10 9	10 10 10 6	10 10 10 7	10 + 8

Finish each row

1	2								
			14						
									30
								39	
		43							50

Review

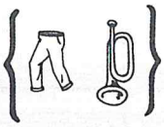
{  } = ...

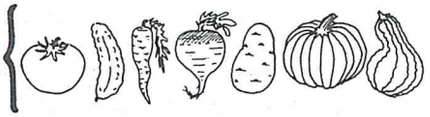
□{  } □{  } □{  }

{ } ∪ { } = ...

□{ } □{ } □{ }

{ } ∪ ..... = { }

□{  } □{ } □{ }

N{  } = _____

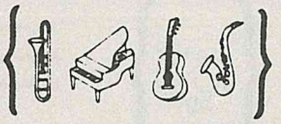
Count by twos

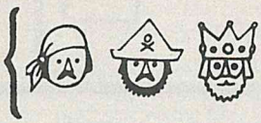
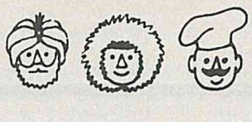
2	4			

N{ } + N{ } = ...

☐ N{ } ☐ N{ } ☐ N{ }

N{ } + ... = N{ }

☐ N{ } ☐ N{  } ☐ N{ }

N{  } + N{  } = ___

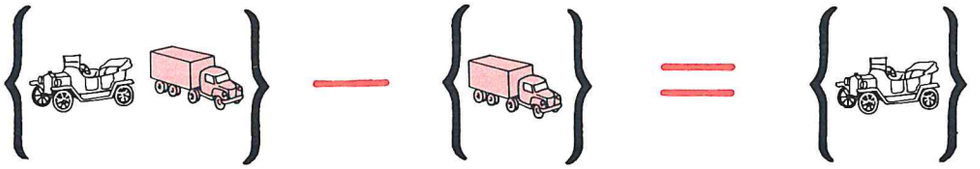
4 + 5 = ___	2 + 6 = ___

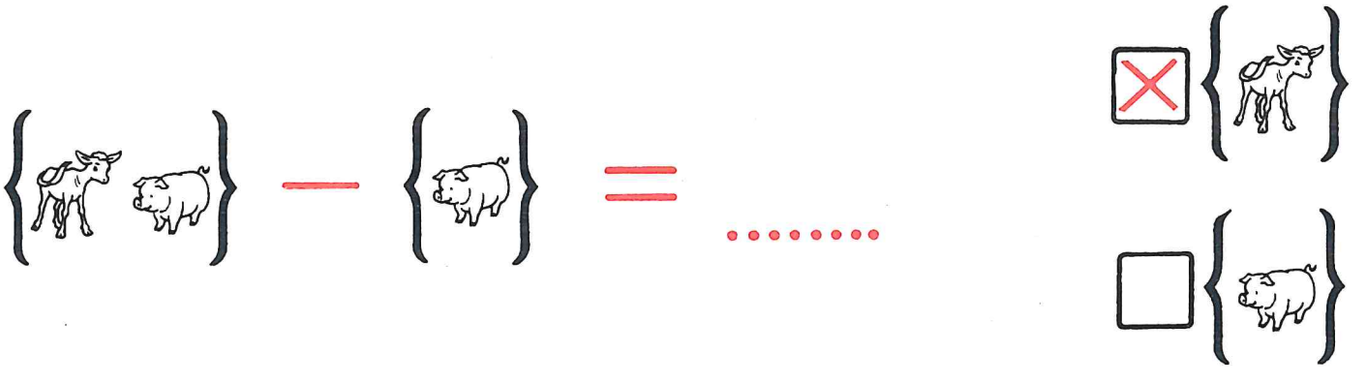
4 + 4 = ___ 1 + 5 = ___	n + 3 = 7 n = ___

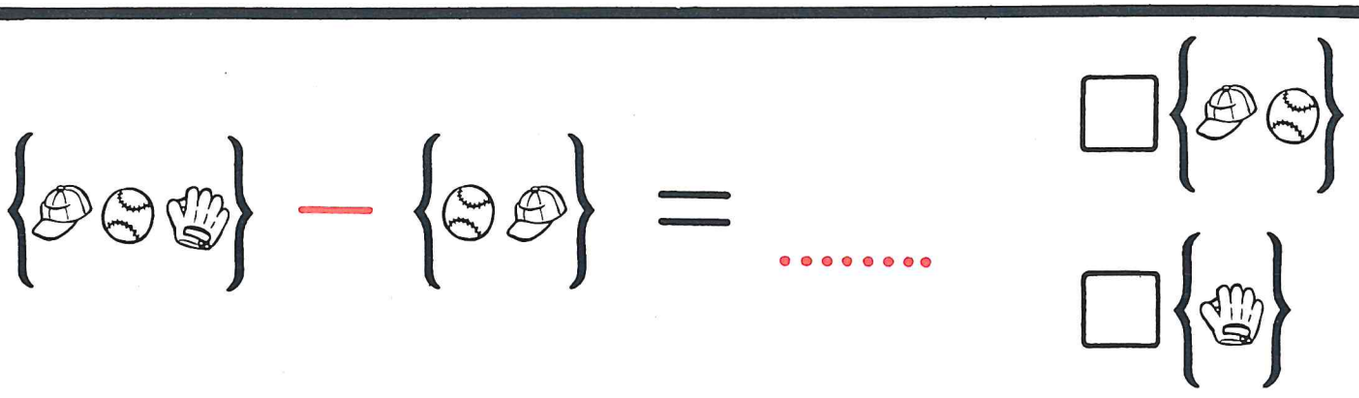
36 is ___ tens and ___ ones.

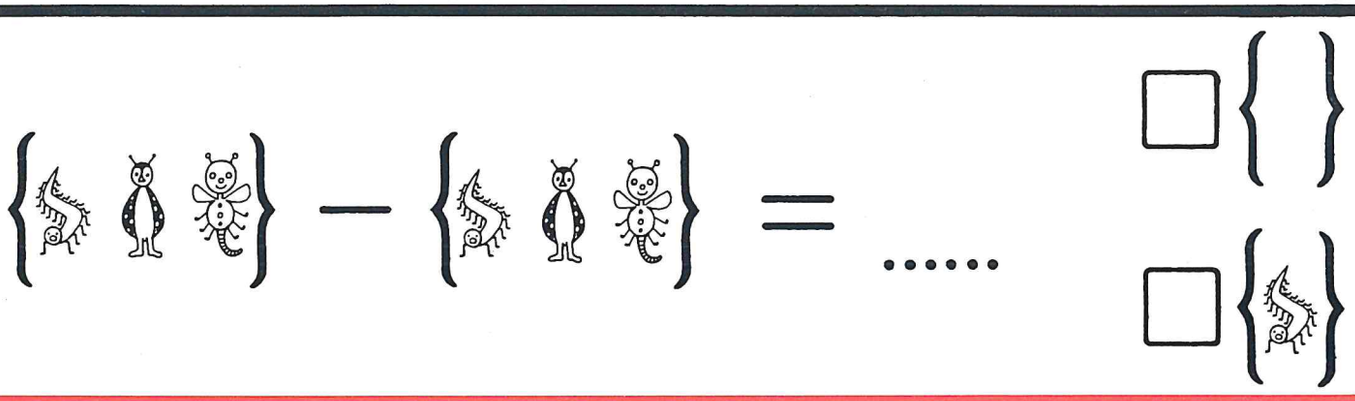
Part 5 Difference of Sets

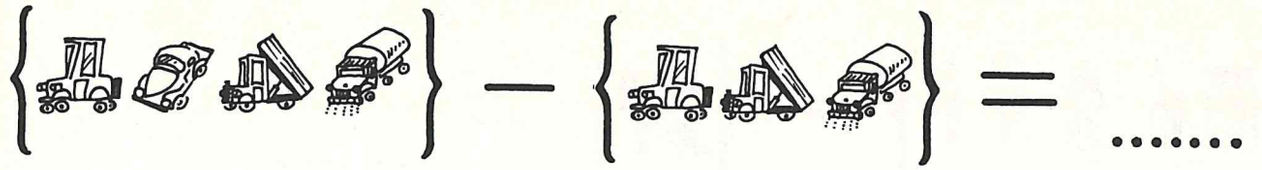
Difference of sets: taking things away.

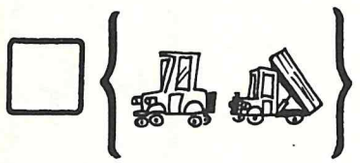
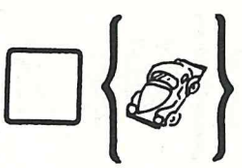
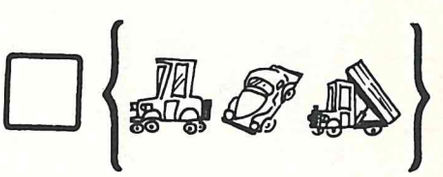


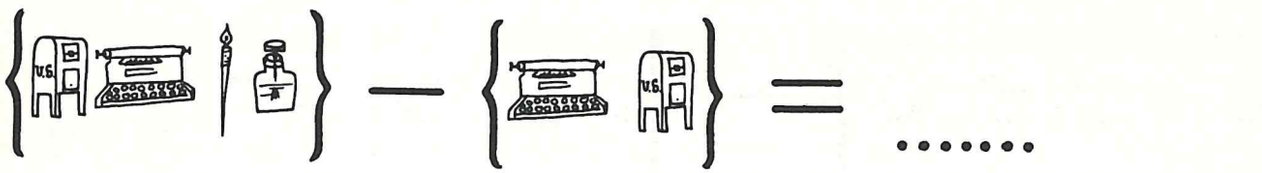


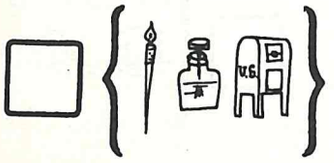
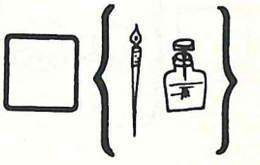


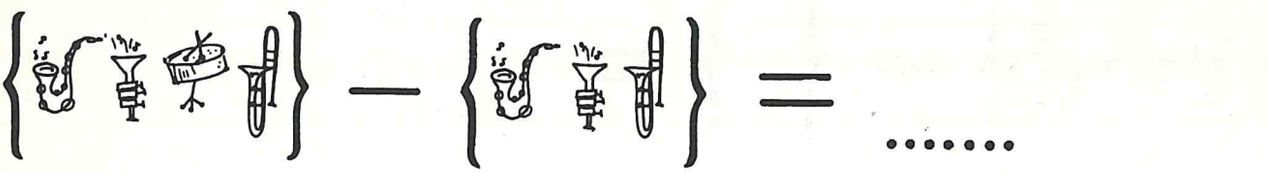


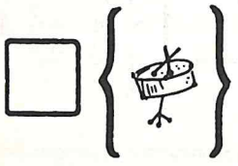
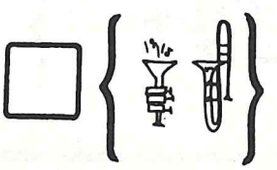
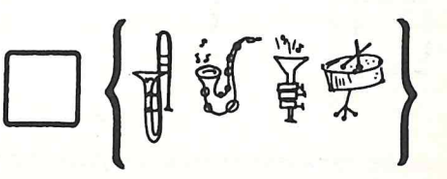


☐  ☐  ☐ 



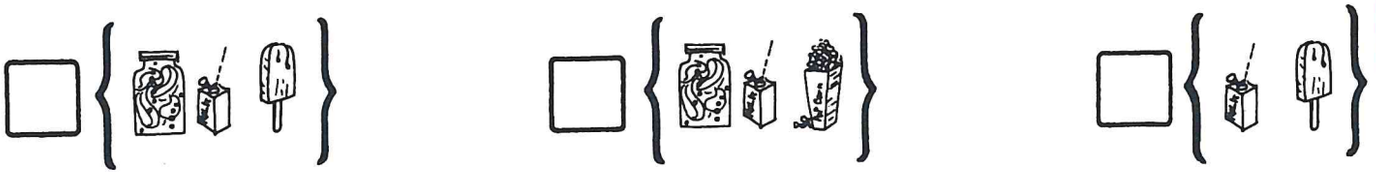
☐  ☐ ☐ 

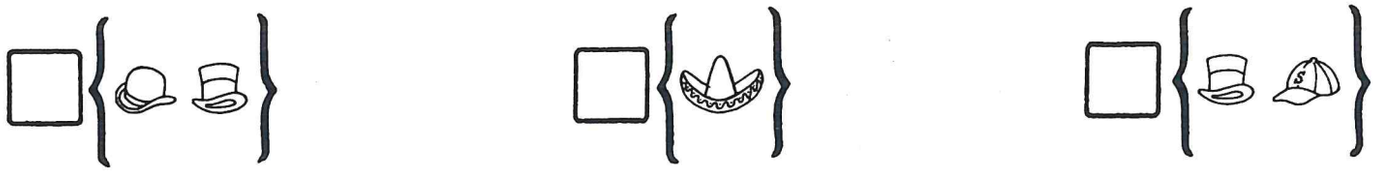


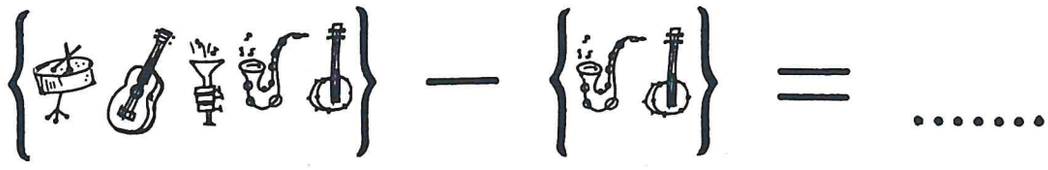
☐  ☐  ☐ 

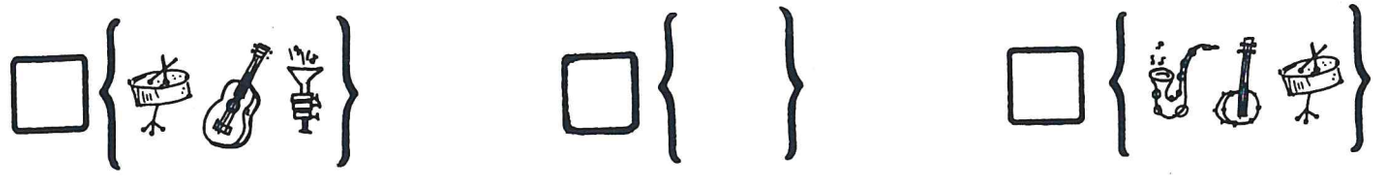
{Dick, Jane, Mary} — {Jane} = ...

☐ {Dick, Jane} ☐ {Dick, Mary} ☐ {Jane, Mary}



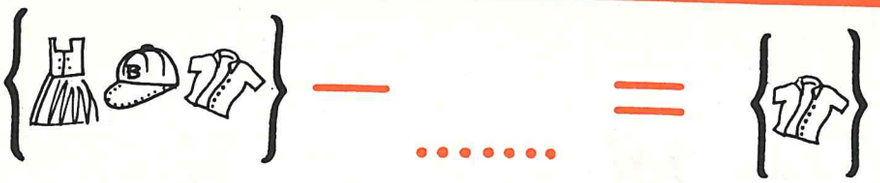


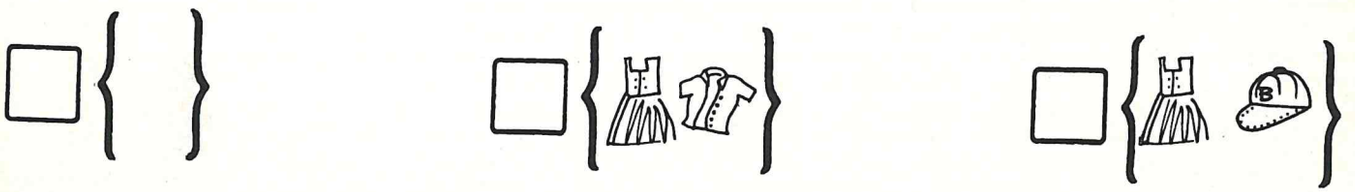


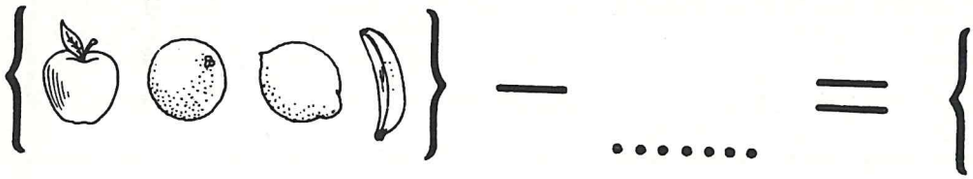


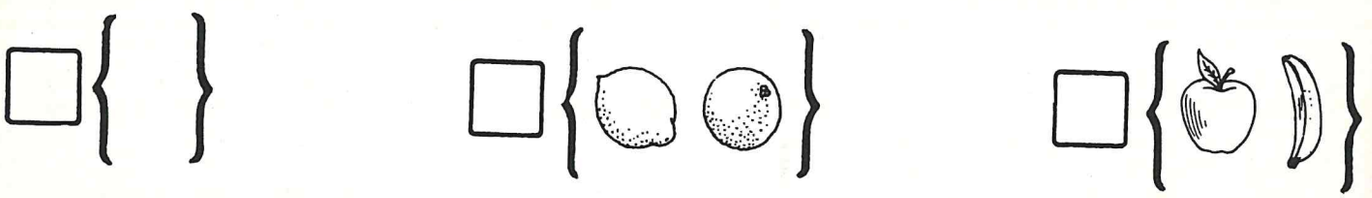
EGGS
VINEGAR
EGGS

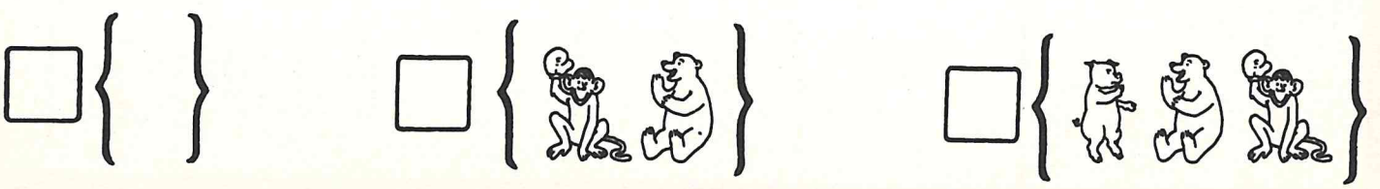
VINEGAR
OLIVES
VINEGAR
OL·VES







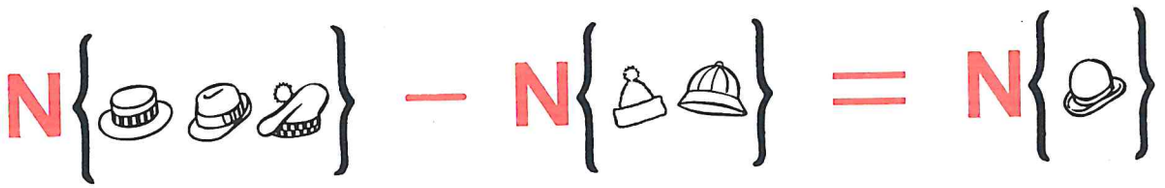


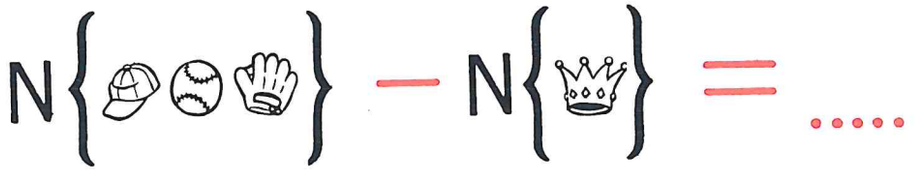


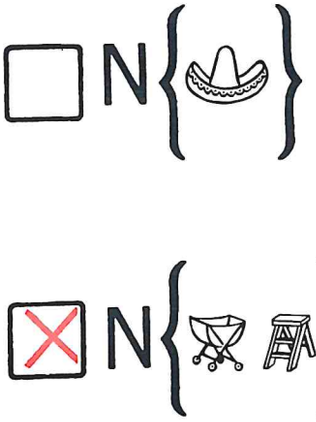
Part 6 Subtraction

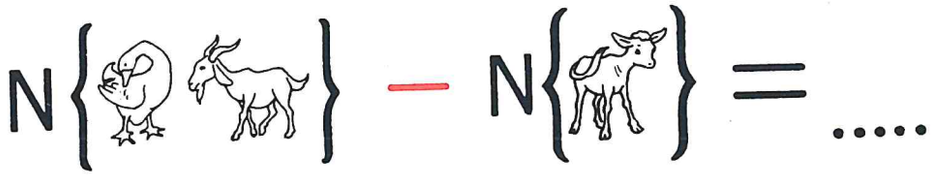
Difference of sets: taking things away

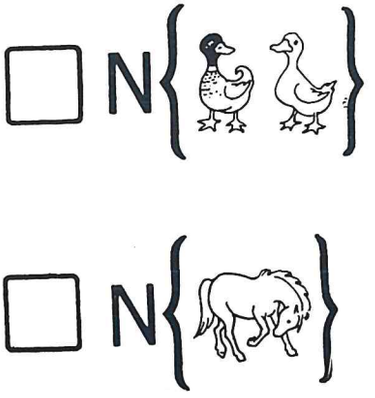
Subtraction: taking numbers away.

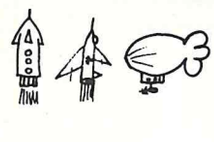


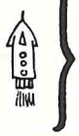








N{  } − N{ } = ...

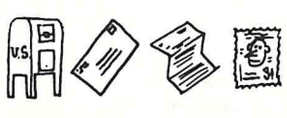
☐ N{  } ☐ N{ } ☐ N{ }

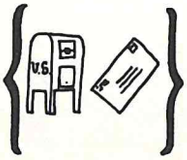
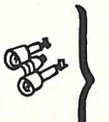
N{ } − N{ } = ...

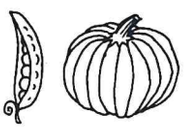
☐ N{ } ☐ N{ } ☐ N{ }

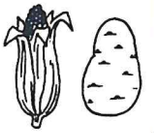
N{ } − N{ } = ...

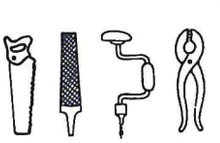
☐ N{ } ☐ N{ } ☐ N{ }

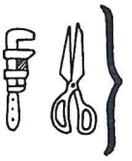
N{  } − N{ } = ...

☐ N{  } ☐ N{ } ☐ N{  }

N{ } − N{  } = ...

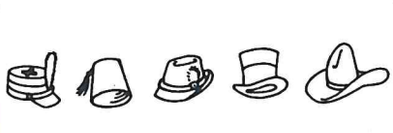
□N{ } □N{  } □N{ }

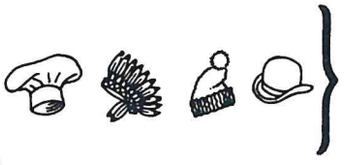
N{ } − N{  } = ...

□N{ } □N{  } □N{ }

N{ } − N{ } = ...

□N{ } □N{ } □N{ }

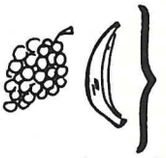
N{  } − N{ } = ...

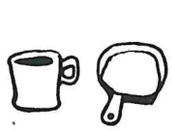
□N{ } □N{  }

N { } − ..... = N { }

☐N { } ☒N { } ☐N { }

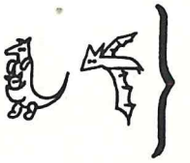
N { } − ..... = N { }

☐N { } ☐N { } ☐N {  }

N {  } − ..... = N { }

☐N { } ☐N { } ☐N { }

N { } − ..... = N { }

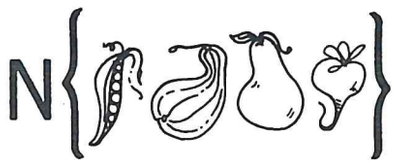
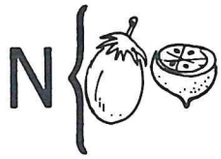
☐N { } ☐N { } ☐N {  }

N{ } − N{ } = 3

4 − 1 = 3

N{ } − N{ } = 2

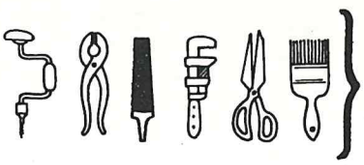
___ − ___ = 2

N{  } − N{  } = 1

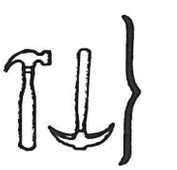
___ − ___ = 1

N{ } − N{ } = 3

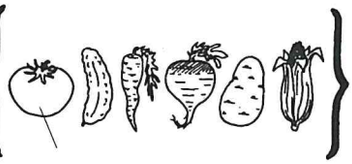
___ − ___ = 3

N{  } − N{ } = 4

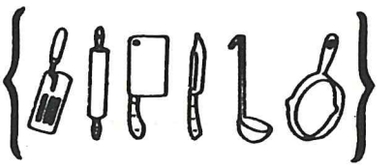
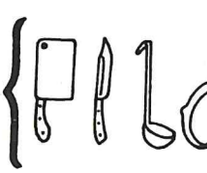
____ − ____ = 4

N{ } − N{  } = 3

____ − ____ = 3

N{  } − N{ } = 2

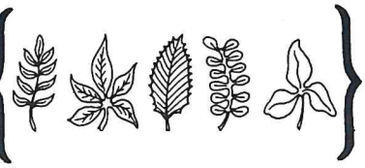
____ − ____ = 2

N{  } − N{  } = 1

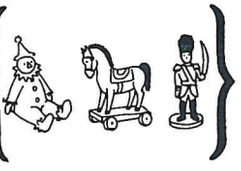
____ − ____ = 1

N{ } − N{ } = 4

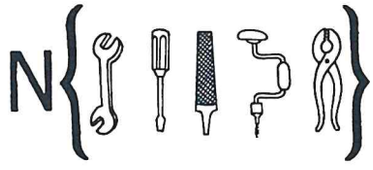
5 − 1 = ____

N{  } − N{ } = ____

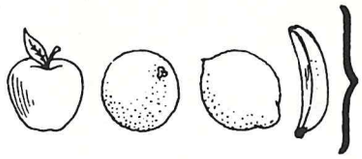
____ − ____ = ____

N{ } − N{  } = ____

____ − ____ = ____

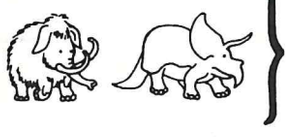
N{  } − N{ } = ____

____ − ____ = ____

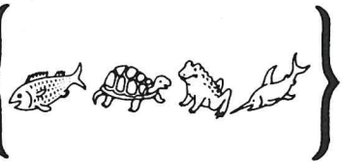
N{  } − N{ } = ____

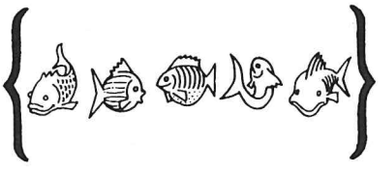
N{ } − N{ } = ____

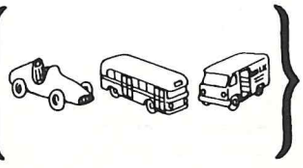
N{ } − ____ = N{ }

N{  } − ____ = N{ }

N{ } − ____ = N{ }

N{  } − ____ = 1

N{  } − ____ = 2

N{  } − ____ = N{ }

2 − 1 = 1	6 − 1 =
1 − 1 =	6 − 2 =
3 − 1 =	6 − 3 =
3 − 2 =	7 − 3 =
4 − 2 =	7 − 2 =
5 − 1 =	8 − 1 =
5 − 2 =	8 − 2 =
5 − 3 =	9 − 1 =
4 − 3 =	9 − 3 =

5 + 3 _____	2 + 4 _____	2 − 1 _____	3 − 2 _____
6 + 2 _____	7 + 1 _____	3 + 4 _____	4 − 2 _____
5 + 4 _____	6 − 2 _____	7 + 2 _____	8 − 1 _____
2 − 2 _____	6 + 3 _____	7 − 3 _____	7 − 2 _____

$3 - 1 = ___$	$1 + ___ = 3$
$5 - 2 = ___$	$2 + ___ = 5$
$7 - 3 = ___$	$3 + ___ = 7$
$4 - ___ = 2$	$2 + ___ = 4$
$6 - ___ = 1$	$1 + ___ = 6$
$___ - 1 = 2$	$2 + 1 = ___$
$___ - 3 = 6$	$6 + 3 = ___$

1 + 1 = 3 − 1

2 + ___ = 4 − 0

3 + ___ = 4 + 2

3 + ___ = 5 − 1

0 + ___ = 2 − 0

5 + ___ = 7 − 1

0 + ___ = 2 − 2

4 + ___ = 5 + 2

$5 - 2 = __ + 2$

$6 - 1 = 2 + __$

$1 + __ = 4 - 1$

$__ + 0 = 2 - 0$

$__ + 1 = 3 - 1$

$2 + __ = 1 + 1$

$4 + __ = 7 - 1$

$5 - __ = 2 + 1$

Finish each row

51									
61									
									80
				85					
									100

zero = 0
one = 1
two = 2
three = 3
four = 4
five = 5

One plus one is two.

1 + 1 = 2

One plus two is _____.

___ + ___ = ___

Three plus zero is _____.

___ + ___ = ___

Two plus two is _____.

___ + ___ = ___

Three plus two is _____.

___ + ___ = ___

six = 6
seven = 7
eight = 8
nine = 9
ten = 10

One plus four is _____.

___ + ___ = ___

Two plus four is _____.

___ + ___ = ___

Three plus five is _____.

___ + ___ = ___

Six plus three is _____.

___ + ___ = ___

Two plus seven is _____.

___ + ___ = ___

Four plus three is _____.

Three plus six is _____.

Zero plus five is _____.

Six plus four is _____.

Four plus six is _____.

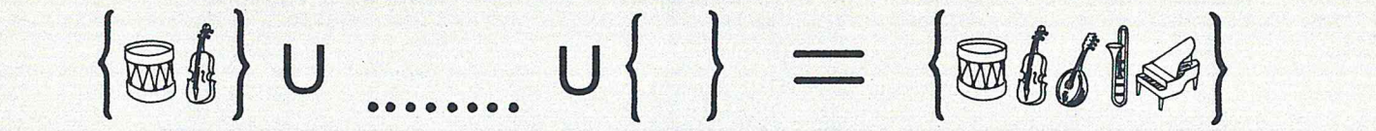
Five plus three is _____.

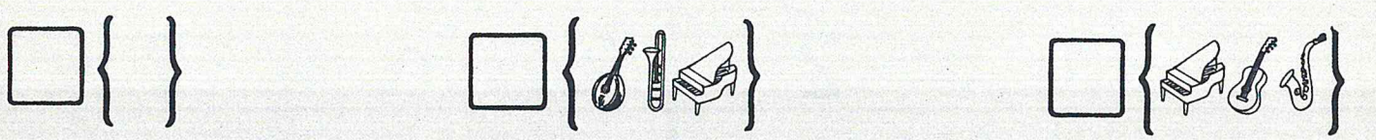
Two plus zero equals _____.

Zero plus zero equals _____.

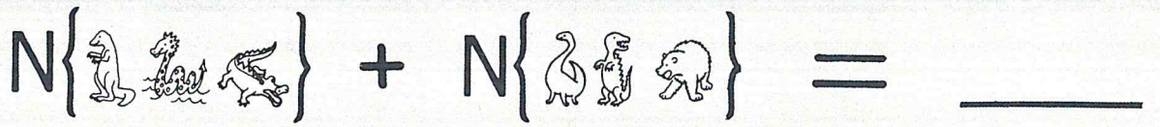
$2 - 1 = m$ $m =$ ____	$2 + 3 = n$ $n =$ ____
$3 - m = 2$ $m =$ ____	$6 + n = 7$ $n =$ ____
$4 - m = 2$ $m =$ ____	$4 + m = 8$ $m =$ ____
$3 - n = 0$ $n =$ ____	$3 + m = 9$ $m =$ ____
$m - 1 = 1$ $m =$ ____	$n + 2 = 6$ $n =$ ____

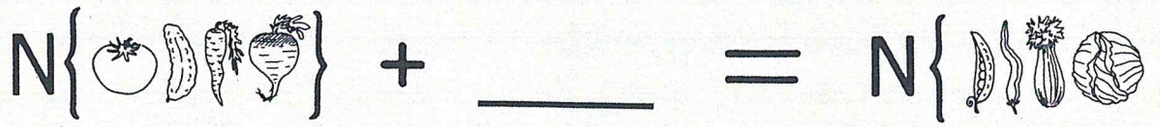
Review





{Joe, Tom} U {_____} = {Tom, Joe, Ann}

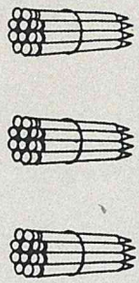
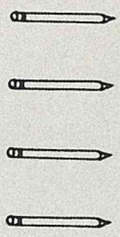




5 + ___ = 7 | 4 + ___ = 9

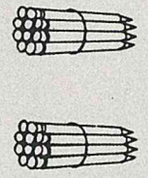
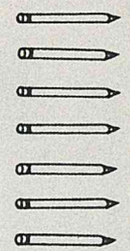
5 + ___ = 3 + 5

67 is _____ tens and _____ ones.

____ tens ____ ones

_____ in all

____ tens ____ ones

_____ in all

$40 + 9 = ____$

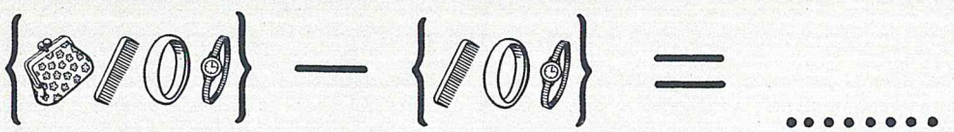
____ tens and ____ ones are _____

10	10	10	10
10	10	10	10
1	10	10	10
1	2	10	3
___	2	5	3
	___	___	___

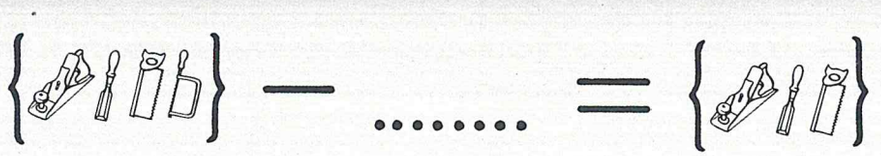
Finish the row.

42						48

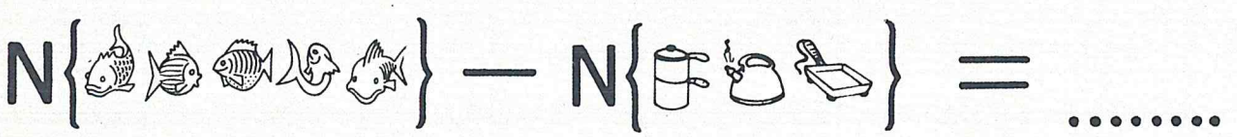
Review



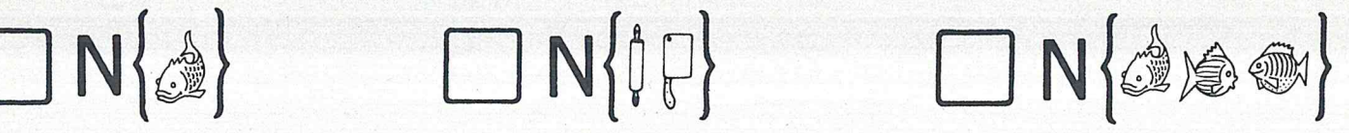
☐ ☐ ☐



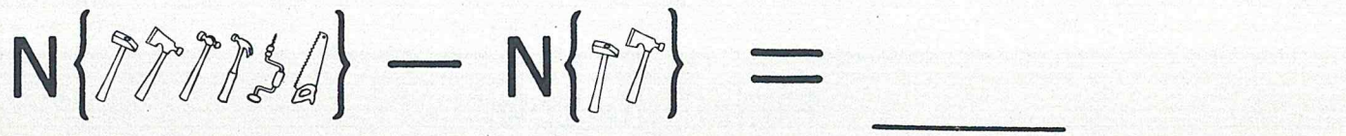
☐ ☐ ☐

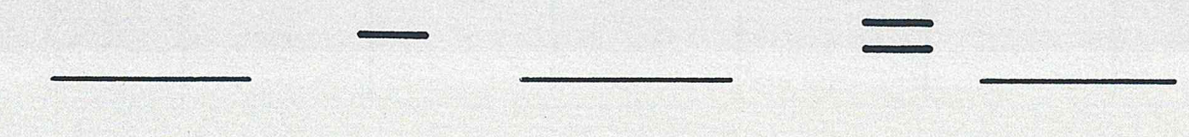


☐ ☐ ☐

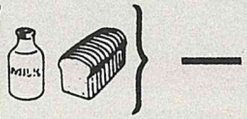
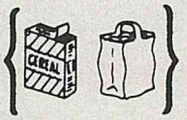


☐ ☐ ☐





N{ } − N{ } = ___

N{  } − ___ = N{  }

6 − 6 = ___ | 5 − 2 = ___

6	7	3	9
+ 2	− 3	+ 5	− 4
___	___	___	___

6 − 3 = ___ + 2

Five plus three is _____.

Seven plus two is _____.

4 + m = 6

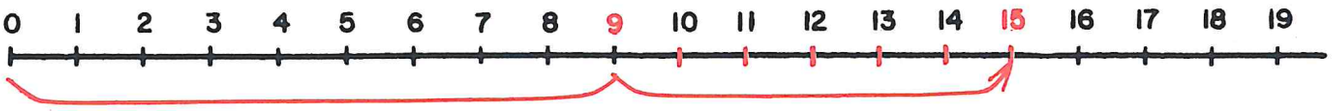
m = ___

3 + m = 7

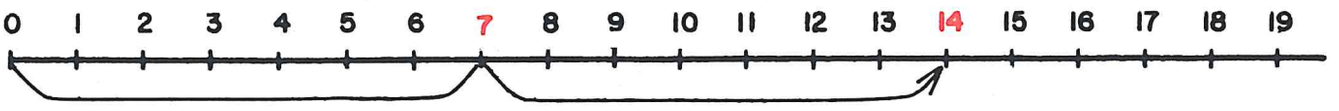
m = ___

Part 7 Numbers 11 to 19

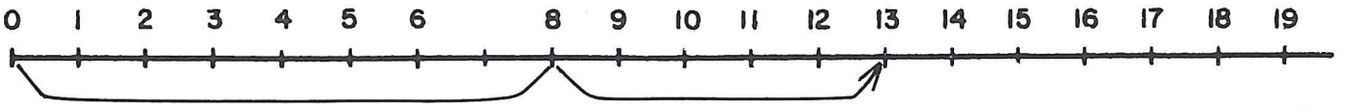
We can show addition on the number line.



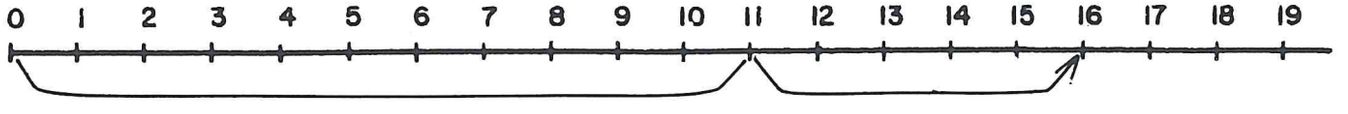
$9 + 6 = 15$



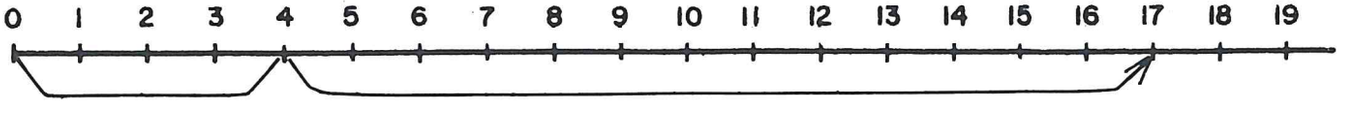
$7 + 7 = ___$



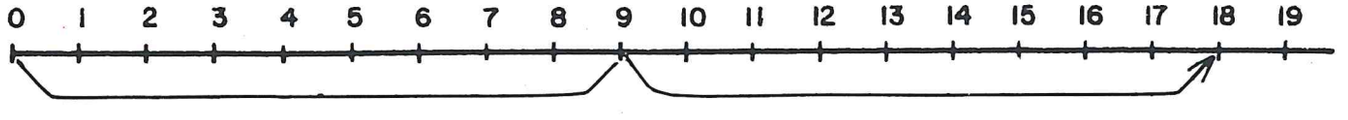
$8 + 5 = ___$



$11 + 5 = ___$

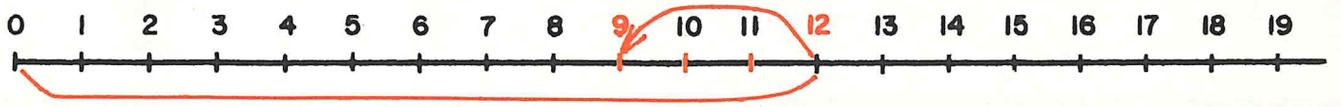


$4 + 13 = ___$

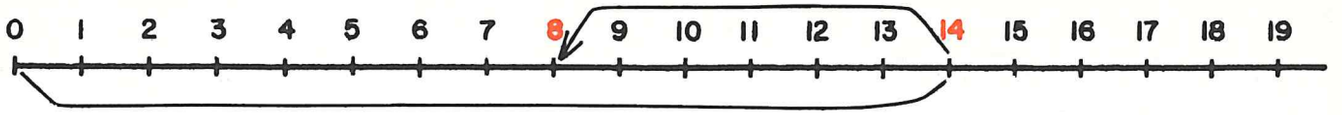


$9 + 9 = ___$

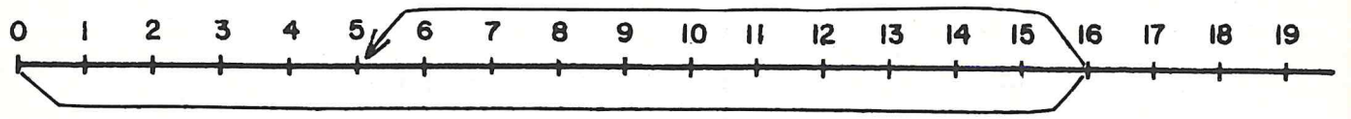
We can show subtraction on the number line.



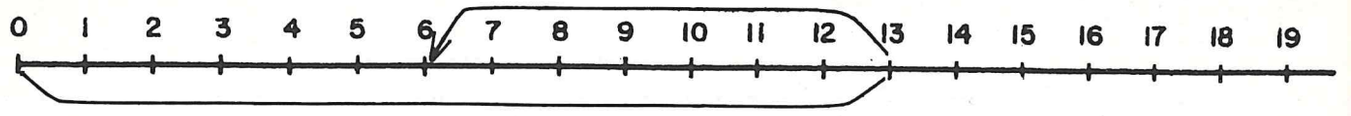
$12 - 3 = 9$



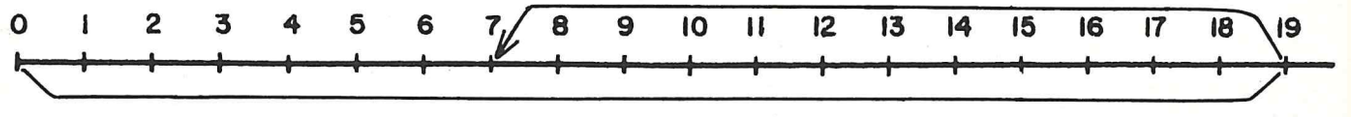
$14 - 6 = ___$



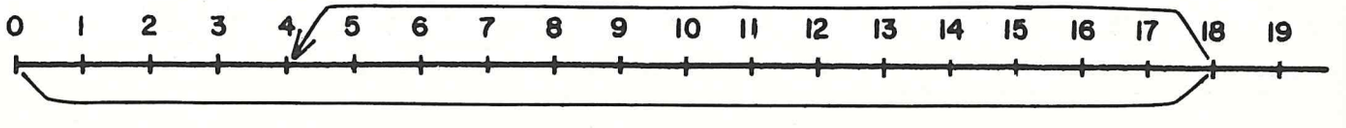
$16 - 11 = ___$



$13 - 7 = ___$



$19 - 12 = ___$

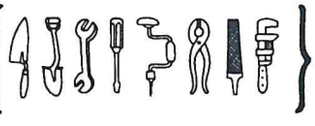


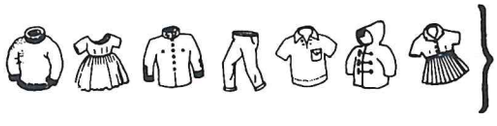
$18 - 14 = ___$

Eleven = 11

10 + ___ = 11	11 − 1 = ___
9 + ___ = 11	11 − 9 = ___
1 + ___ = 11	11 − 3 = ___
4 + ___ = 11	11 − 4 = ___
5 + ___ = 11	11 − 6 = ___
7 + ___ = 11	11 − 11 = ___
0 + ___ = 11	11 − 0 = ___

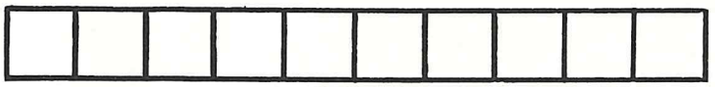
Ten plus one is _____.

N{  } + ____ = 11

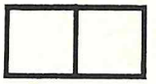
N{  } + ____ = 11

10	5	4	11	11	11
+ 1	+ 6	+ 7	+ 8	+ 9	+ 0
___	___	___	___	___	___

Twelve = 12



ten



two

10 + ___ = 12	12 − 8 = ___
7 + ___ = 12	12 − 5 = ___
4 + ___ = 12	12 − 11 = ___
1 + ___ = 12	12 − 6 = ___
9 + ___ = 12	12 − 2 = ___
0 + ___ = 12	12 − 7 = ___
3 + ___ = 12	12 − 9 = ___

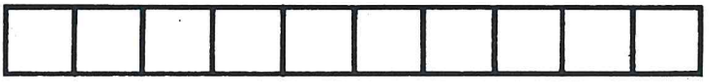
Ten plus two is _____.

N{ } + _____ = 12

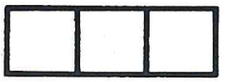
1 foot = _____ inches.

11	5	8	9	7	12
+1	+6	+2	+3	+4	+0
___	___	___	___	___	___

Thirteen = 13



ten



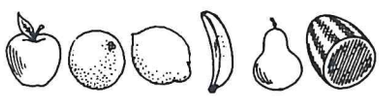
three

10 + ___ = 13	13 − 3 = ___
7 + ___ = 13	13 − 6 = ___
5 + ___ = 13	13 − 8 = ___
9 + ___ = 13	13 − 4 = ___
2 + ___ = 13	13 − 11 = ___

Ten plus three is _____.

Thirteen is one ten and _____ ones.

N{ } + N{ } = _____

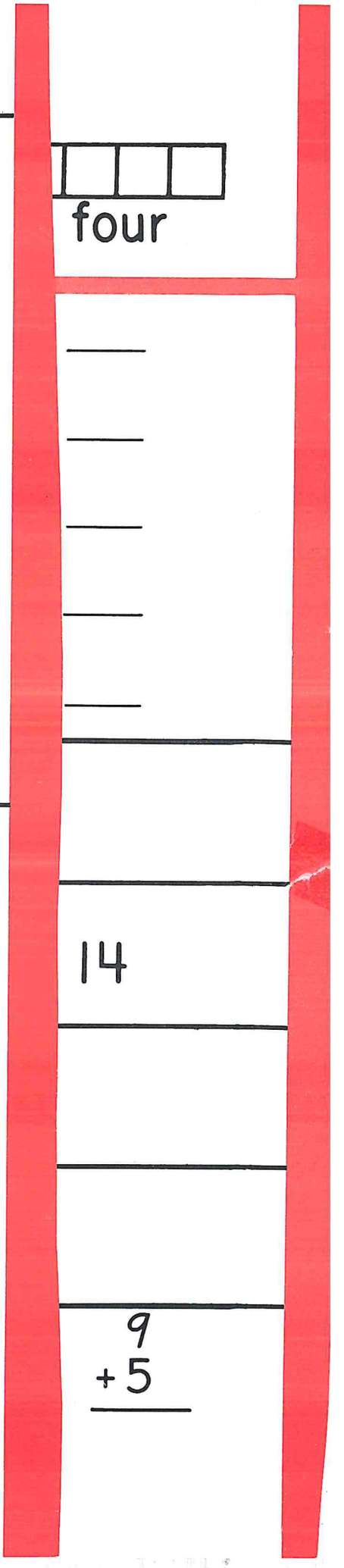
N{  } + _____ = 13

12	7	6	8	8	5	11
+ 1	+ 4	+ 7	+ 2	+ 4	+ 6	+ 2
___	___	___	___	___	___	___

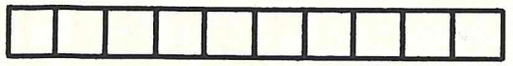
5 + 5	6 + 5	10 − 3	12 − 4	11 + 0	12 − 5
6 + 4	3 + 9	6 + 7	3 + 8	13 − 5	12 − 6
5 + 7	4 + 9	9 + 2	10 − 7	12 − 3	13 − 2
13 − 4	3 + 7	12 − 0	13 − 6	7 + 4	6 + 3
9 + 3	13 − 8	12 − 7	11 − 2	2 + 11	13 − 13

Sums to 12, 13, 14, and 15.

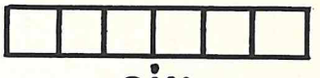
+ ___ = 12	___ + ___ = 13
+ ___ = 12	___ + ___ = 13
+ ___ = 12	___ + ___ = 13
+ ___ = 12	___ + ___ = 13
+ ___ = 12	___ + ___ = 13
+ ___ = 12	___ + ___ = 13
+ ___ = 12	___ + ___ = 13
+ ___ = 14	___ + ___ = 15
+ ___ = 14	___ + ___ = 15
+ ___ = 14	___ + ___ = 15
+ ___ = 14	___ + ___ = 15
+ ___ = 14	___ + ___ = 15
+ ___ = 14	___ + ___ = 15
+ ___ = 14	___ + ___ = 15
+ ___ = 14	___ + ___ = 15



Sixteen = 16



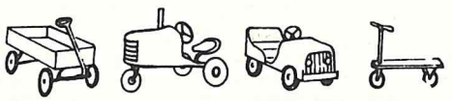
ten

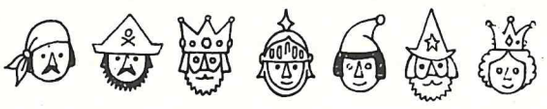


six

10 + ___ = 16	16 − 3 = ___	12 + ___ = 16
9 + ___ = 16	16 − 7 = ___	1 + ___ = 16
15 + ___ = 16	16 − 2 = ___	13 + ___ = 16
8 + ___ = 16	16 − 6 = ___	16 − ___ = 9
4 + ___ = 16	16 − 5 = ___	16 − ___ = 5

Ten plus six equals _____.

N{  } + _____ = 16

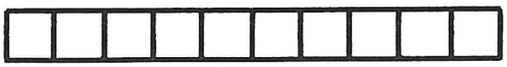
N{  } + _____ = 16

16 inches = _____ foot ____ inches

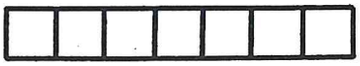
16 cents = ____ dime ____ cents

15	13	9	8	10	16
+1	+1	+4	+8	+4	+0
___	___	___	___	___	___

Seventeen = 17



ten



seven

10 + ___ = 17	17 − 5 = ___	3 + ___ = 17
9 + ___ = 17	17 − 14 = ___	5 + ___ = 17
6 + ___ = 17	17 − 12 = ___	11 + ___ = 17
4 + ___ = 17	17 − 8 = ___	17 − ___ = 17
7 + ___ = 17	17 − 16 = ___	17 − ___ = 17

Ten plus seven is _____.

N{ } + ____ = 17

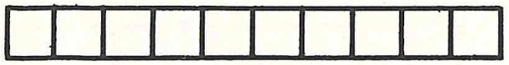
N{ } + ____ = 17

17 inches = ____ foot ____ inches

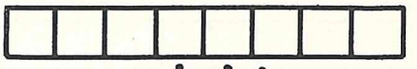
17 cents = ____ dime ____ cents

16	13	8	9	9	6
+ 1	+ 3	+ 6	+ 5	+ 8	+ 5
___	___	___	___	___	___

Eighteen = 18



ten

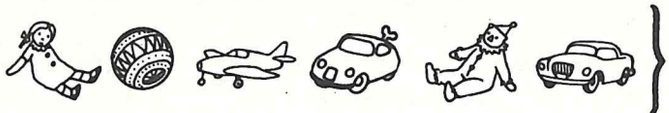


eight

10 + ___ = 18	18 − 6 = ___	14 + ___ = 18
17 + ___ = 18	18 − 11 = ___	3 + ___ = 18
15 + ___ = 18	18 − 4 = ___	18 + ___ = 18
0 + ___ = 18	18 − 2 = ___	18 − ___ = 17
9 + ___ = 18	18 − 13 = ___	18 − ___ = 10

Ten plus eight equals _____.

N{ } + _____ = 18

N{  } + _____ = 18

18 inches = _____ foot _____ inches

18 cents = _____ dime _____ cents

17	15	12	9	18	13
+1	+1	+4	+6	+0	+2
___	___	___	___	___	___

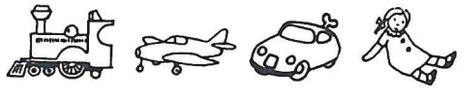
Nineteen = 19

ten

nine

10 + ___ = 19	19 − 5 = ___	2 + ___ = 19
3 + ___ = 19	19 − 10 = ___	16 + ___ = 19
7 + ___ = 19	19 − 6 = ___	1 + ___ = 19
11 + ___ = 19	19 − 0 = ___	19 − ___ = 19
14 + ___ = 19	19 − 13 = ___	19 − ___ = 4

Ten plus nine equals _____.

N{  } + _____ = 19

N{ } + _____ = 19

19 inches = _____ foot _____ inches

19 cents = _____ dimes _____ cents _____

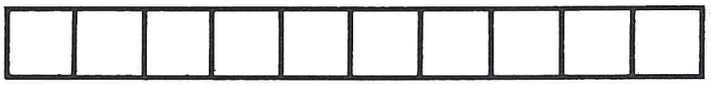
18	6	15	13	2	19
+ 1	+ 8	+ 3	+ 4	+17	+ 0
___	___	___	___	___	___

___ + ___ = 16	___ + ___ = 16	___ + ___ = 16
___ + ___ = 16	___ + ___ = 16	___ + ___ = 16
___ + ___ = 16	___ + ___ = 16	___ + ___ = 16
___ + ___ = 17	___ + ___ = 17	___ + ___ = 17
___ + ___ = 17	___ + ___ = 17	___ + ___ = 17
___ + ___ = 17	___ + ___ = 17	___ + ___ = 17
___ + ___ = 18	___ + ___ = 18	___ + ___ = 18
___ + ___ = 18	___ + ___ = 18	___ + ___ = 18
___ + ___ = 18	___ + ___ = 18	___ + ___ = 18
___ + ___ = 18	___ + ___ = 18	___ + ___ = 18
___ + ___ = 19	___ + ___ = 19	___ + ___ = 19
___ + ___ = 19	___ + ___ = 19	___ + ___ = 19
___ + ___ = 19	___ + ___ = 19	___ + ___ = 19
___ + ___ = 19	___ + ___ = 19	___ + ___ = 19

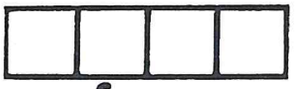
11 + 2	4 + 7	9 + 3	8 + 8	6 + 6
13 − 4	12 − 3	11 − 5	15 − 5	10 − 7
16 + 2	8 + 6	17 + 2	19 − 4	18 − 5
14 − 4	11 − 3	12 − 8	13 − 6	10 − 5
8 + 4	7 + 7	14 − 6	15 − 7	12 − 2
11 + 8	16 − 7	10 + 7	9 + 6	15 − 4

5 + 5	6 + 5	10 − 3	12 − 4	11 + 0	12 − 5
6 + 4	3 + 9	6 + 7	3 + 8	13 − 5	12 − 6
5 + 7	4 + 9	9 + 2	10 − 7	12 − 3	13 − 2
13 − 4	3 + 7	12 − 0	13 − 6	7 + 4	6 + 3
9 + 3	13 − 8	12 − 7	11 − 2	2 + 11	13 − 13

Fourteen = 14



ten



four

10 + ___ = 14	14 − 1 = ___
8 + ___ = 14	14 − 12 = ___
9 + ___ = 14	14 − 5 = ___
7 + ___ = 14	14 − 6 = ___
11 + ___ = 14	14 − 3 = ___

Ten plus four is _____.

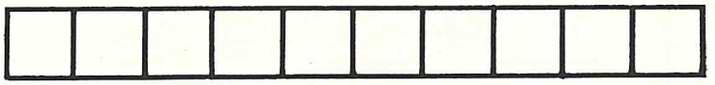
N{ } + _____ = 14

14 inches = ___ foot ___ inches

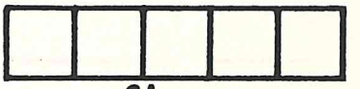
14 cents = ___ dime ___ cents

13	8	6	7	9	9
+1	+4	+5	+7	+4	+5
___	___	___	___	___	___

Fifteen = 15



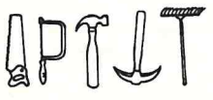
ten



five

10 + ____ = 15	15 — 4 = ____
8 + ____ = 15	15 — 9 = ____
3 + ____ = 15	15 — 1 = ____
11 + ____ = 15	15 — 13 = ____
6 + ____ = 15	15 — 7 = ____

Ten plus five is _____.

N{  } + _____ = 15

15 inches = ____ foot ____ inches

15 cents = ____ dime ____ cents

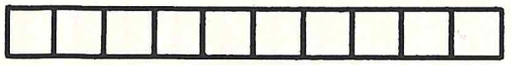
14	8	9	11	5	4
+1	+5	+6	+3	+6	+0
____	____	____	____	____	____

Sums to 12, 13, 14, and 15.

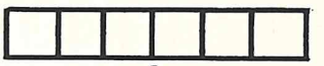
___ + ___ = 12	___ + ___ = 13
___ + ___ = 12	___ + ___ = 13
___ + ___ = 12	___ + ___ = 13
___ + ___ = 12	___ + ___ = 13
___ + ___ = 12	___ + ___ = 13
___ + ___ = 12	___ + ___ = 13
___ + ___ = 12	___ + ___ = 13

___ + ___ = 14	___ + ___ = 15
___ + ___ = 14	___ + ___ = 15
___ + ___ = 14	___ + ___ = 15
___ + ___ = 14	___ + ___ = 15
___ + ___ = 14	___ + ___ = 15
___ + ___ = 14	___ + ___ = 15
___ + ___ = 14	___ + ___ = 15
___ + ___ = 14	___ + ___ = 15

Sixteen = 16



ten



six

10 + ___ = 16	16 − 3 = ___	12 + ___ = 16
9 + ___ = 16	16 − 7 = ___	1 + ___ = 16
15 + ___ = 16	16 − 2 = ___	13 + ___ = 16
8 + ___ = 16	16 − 6 = ___	16 − ___ = 9
4 + ___ = 16	16 − 5 = ___	16 − ___ = 5

Ten plus six equals _____.

N{ } + _____ = 16

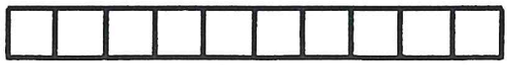
N{ } + _____ = 16

16 inches = _____ foot ____ inches

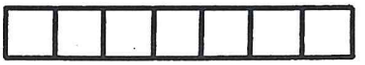
16 cents = ____ dime ____cents

15	13	9	8	10	16
+1	+1	+4	+8	+4	+0
___	___	___	___	___	___

Seventeen = 17



ten



seven

10 + ___ = 17	17 − 5 = ___	3 + ___ = 17
9 + ___ = 17	17 − 14 = ___	5 + ___ = 17
6 + ___ = 17	17 − 12 = ___	11 + ___ = 17
4 + ___ = 17	17 − 8 = ___	17 − ___ = 17
7 + ___ = 17	17 − 16 = ___	17 − ___ = 17

Ten plus seven is _____.

N{ } + ____ = 17

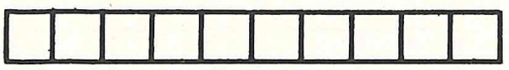
N{ } + ____ = 17

17 inches = ____ foot ____ inches

17 cents = ____ dime ____ cents

16	13	8	9	9	6
+ 1	+ 3	+ 6	+ 5	+ 8	+ 5
____	____	____	____	____	____

Eighteen = 18



ten

eight

10 + ___ = 18	18 − 6 = ___	14 + ___ = 18
17 + ___ = 18	18 − 11 = ___	3 + ___ = 18
15 + ___ = 18	18 − 4 = ___	18 + ___ = 18
0 + ___ = 18	18 − 2 = ___	18 − ___ = 17
9 + ___ = 18	18 − 13 = ___	18 − ___ = 10

Ten plus eight equals _____.

N{ } + _____ = 18

N{ } + _____ = 18

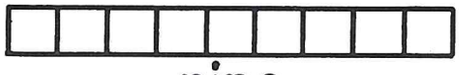
18 inches = _____foot _____inches

18 cents = _____ dime _____cents

17	15	12	9	18	13
+1	+1	+4	+6	+0	+2
___	___	___	___	___	___

Nineteen = 19

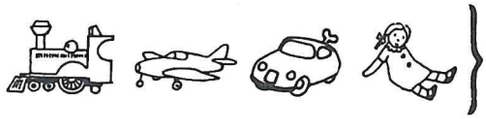
ten



nine

10 + ___ = 19	19 − 5 = ___	2 + ___ = 19
3 + ___ = 19	19 − 10 = ___	16 + ___ = 19
7 + ___ = 19	19 − 6 = ___	1 + ___ = 19
11 + ___ = 19	19 − 0 = ___	19 − ___ = 19
14 + ___ = 19	19 − 13 = ___	19 − ___ = 4

Ten plus nine equals _____.

N{  } + ____ = 19

N{ } + ____ = 19

19 inches = ____ foot ____ inches

19 cents = ____ dimes ____ cents ____

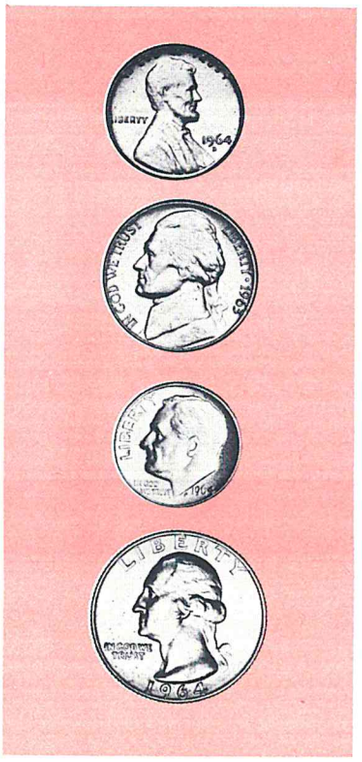
18	6	15	13	2	19
+ 1	+ 8	+ 3	+ 4	+17	+ 0
___	___	___	___	___	___

___ + ___ = 16	___ + ___ = 16	___ + ___ = 16
___ + ___ = 16	___ + ___ = 16	___ + ___ = 16
___ + ___ = 16	___ + ___ = 16	___ + ___ = 16
___ + ___ = 17	___ + ___ = 17	___ + ___ = 17
___ + ___ = 17	___ + ___ = 17	___ + ___ = 17
___ + ___ = 17	___ + ___ = 17	___ + ___ = 17
___ + ___ = 18	___ + ___ = 18	___ + ___ = 18
___ + ___ = 18	___ + ___ = 18	___ + ___ = 18
___ + ___ = 18	___ + ___ = 18	___ + ___ = 18
___ + ___ = 18	___ + ___ = 18	___ + ___ = 18
___ + ___ = 19	___ + ___ = 19	___ + ___ = 19
___ + ___ = 19	___ + ___ = 19	___ + ___ = 19
___ + ___ = 19	___ + ___ = 19	___ + ___ = 19
___ + ___ = 19	___ + ___ = 19	___ + ___ = 19

11 + 2	4 + 7	9 + 3	8 + 8	6 + 6
13 − 4	12 − 3	11 − 5	15 − 5	10 − 7
16 + 2	8 + 6	17 + 2	19 − 4	18 − 5
14 − 4	11 − 3	12 − 8	13 − 6	10 − 5
8 + 4	7 + 7	14 − 6	15 − 7	12 − 2
11 + 8	16 − 7	10 + 7	9 + 6	15 − 4

$3 + 4 + 7 =$ ____	$14 - 3 =$ ____
$2 + 2 + 6 =$ ____	$12 - 9 =$ ____
$3 + 3 + 9 =$ ____	$15 - 7 =$ ____
$6 + 6 + 6 =$ ____	$17 - 6 =$ ____
$4 + 4 + 6 =$ ____	$11 - 3 =$ ____
$5 + 5 + 8 =$ ____	$16 - 7 =$ ____
$2 + 2 + 7 =$ ____	$14 - 2 =$ ____
$8 + 8 + 0 =$ ____	$19 - 11 =$ ____
$4 + 4 + 9 =$ ____	$18 - 8 =$ ____
$7 + 7 + 5 =$ ____	$15 - 0 =$ ____

Money

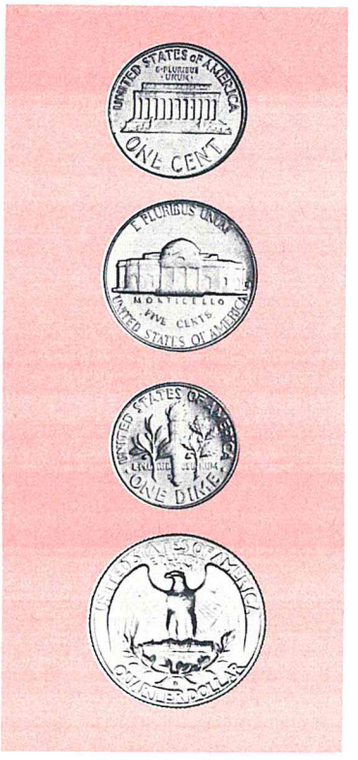


a penny = 1 cent

a nickel = 5 cents

a dime = 10 cents

a quarter = 25 cents



= 5 ¢ = a nickel

= ____ ¢ = a dime

= ____ ¢ = a quarter

= ____ ¢ = a quarter

How much ?

= _____ cents

= _____ ¢

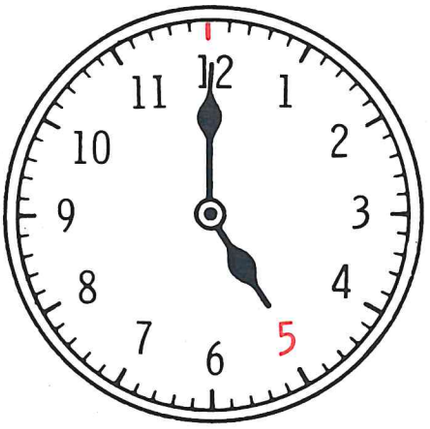
= _____ cents

= _____ cents

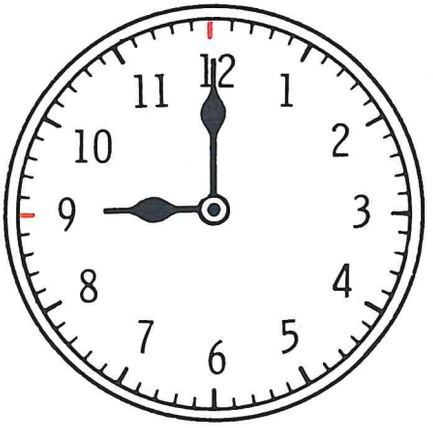
= _____ cents

= _____ ¢

= _____ cents

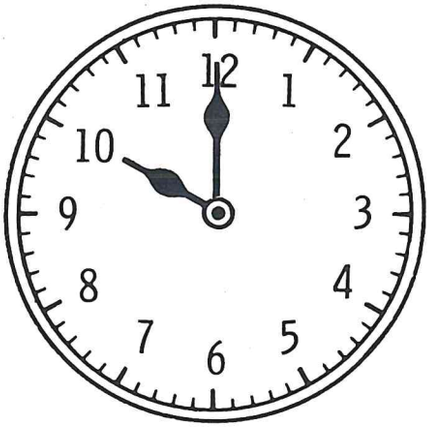


5 o'clock

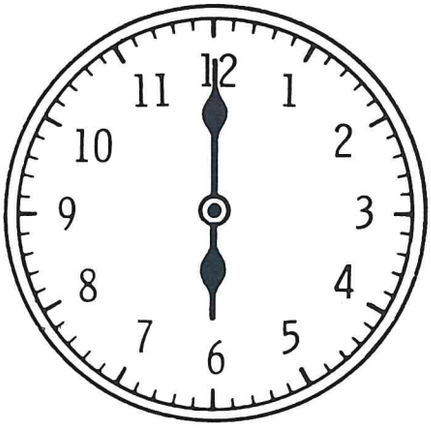


_____ o'clock

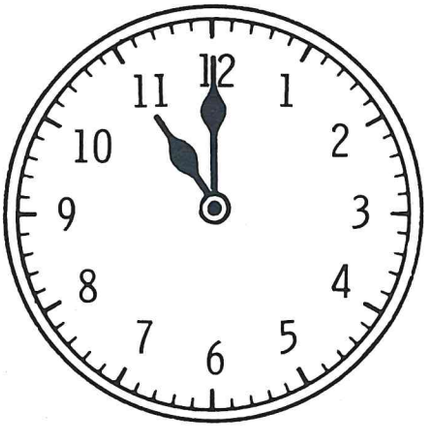
_____ o'clock



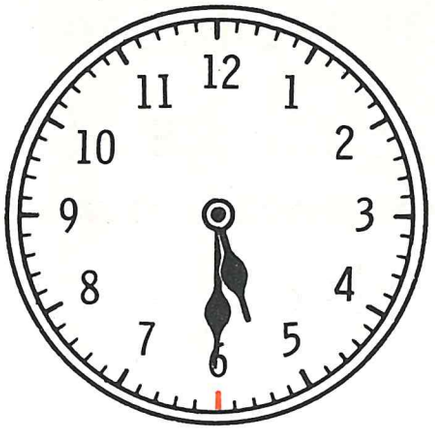
_____ o'clock



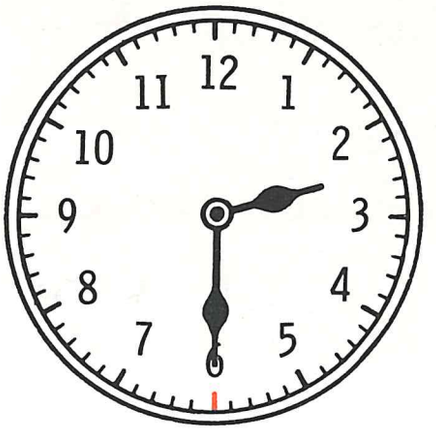
_____ o'clock



_____ o'clock



5:30 o'clock



_____ o'clock

_____ o'clock

_____ o'clock

_____ o'clock

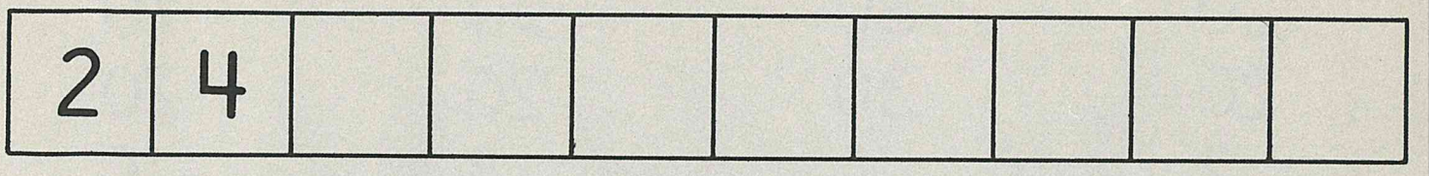
_____ o'clock

This sign + is called the plus sign.
This sign — is called the minus sign.

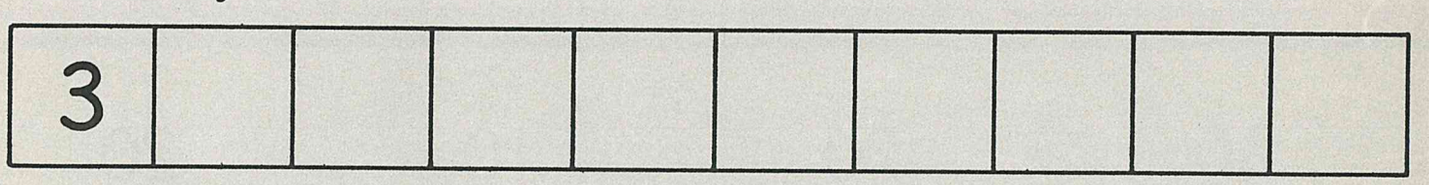
Put in the missing signs

4 + 5 = 9	40 10 = 30
3 1 = 2	20 20 = 40
8 3 = 5	20 60 = 80
6 3 = 9	70 10 = 60
8 2 = 6	9 1 = 10
7 2 = 9	10 40 = 50
3 3 = 0	7 1 = 6
5 3 = 2	8 6 = 2

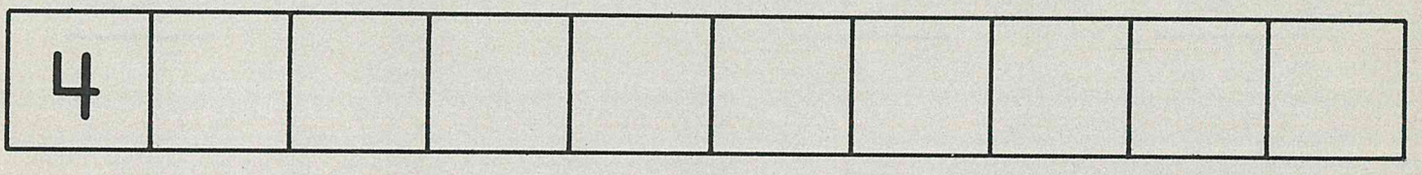
Count by twos



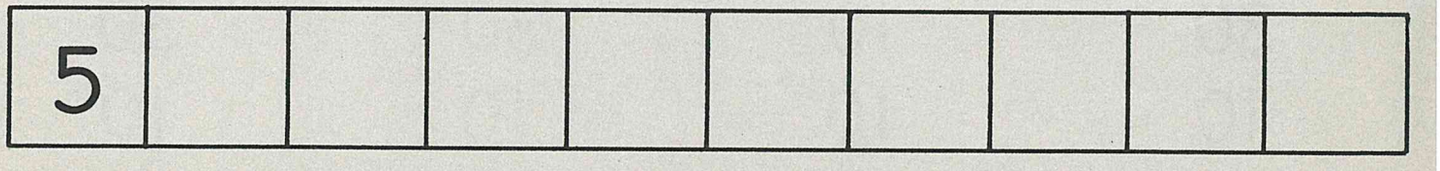
Count by threes



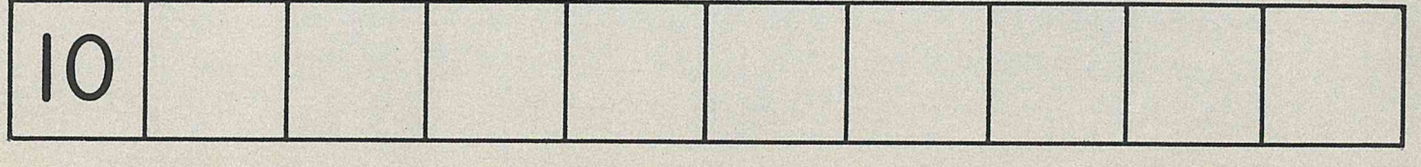
Count by fours



Count by fives



Count by tens



Review

20	30	50	70
20	30	20	20
2	6	8	6

60	20	10	20
20	10	50	40
2	20	6	1
2	1		5

20	70	20	30
30	10	30	30
10	10	10	10
10	7	2	4
1		3	3

Ten plus three is _____.

Ten plus six is _____.

Ten plus nine is _____.

15 − 3 = ___	7 + ___ = 17
17 − 8 = ___	4 + ___ = 15
12 − 4 = ___	5 + ___ = 18
18 − 9 = ___	9 + ___ = 13
14 − 5 = ___	12 + ___ = 19

N{ } + _____ = 16

N{ } + _____ = 13

18 inches = _____ foot _____ inches.

12 + n = 15

n = ___

7 + n = 15

n = ___

Review

56 is ____ tens and ____ ones.

90 is ____ tens and ____ ones.

29 is ____ tens and ____ ones.

78 is ____ tens and ____ ones.

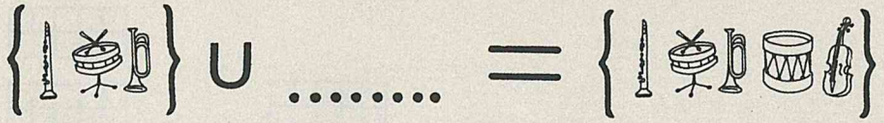
45 is ____ tens and ____ ones.

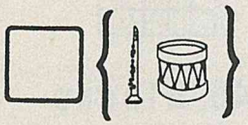
$18 - n = 11$ $n =$ ____	$16 - n = 4$ $n =$ ____
$19 - n = 0$ $n =$ ____	$17 - n = 14$ $n =$ ____

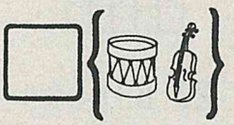
18 cents = ____ dime ____ cents.

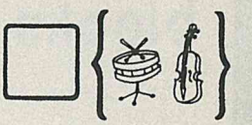
13 cents = ____ dime ____ cents.

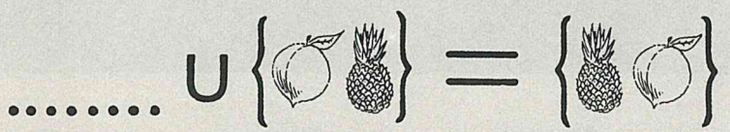
16 cents = ____ dime ____ cents.

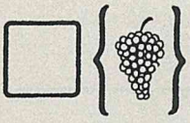


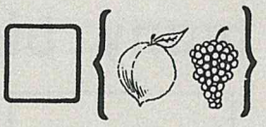
☐ 

☐ 

☐ 



☐ 

☐ 

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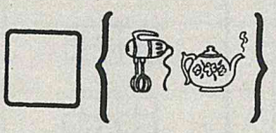
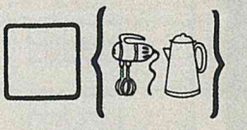
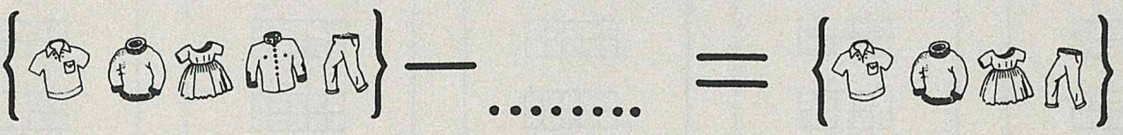
☐ 

☐ 



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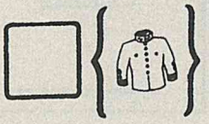
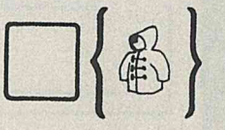
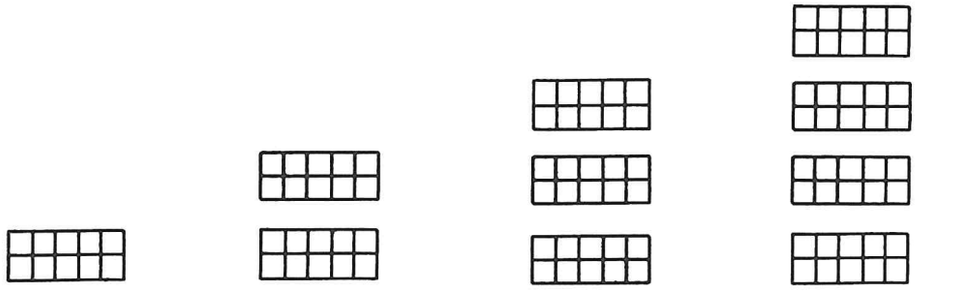
☐ 

☐ 

Part 8 Hundreds, Tens and Ones

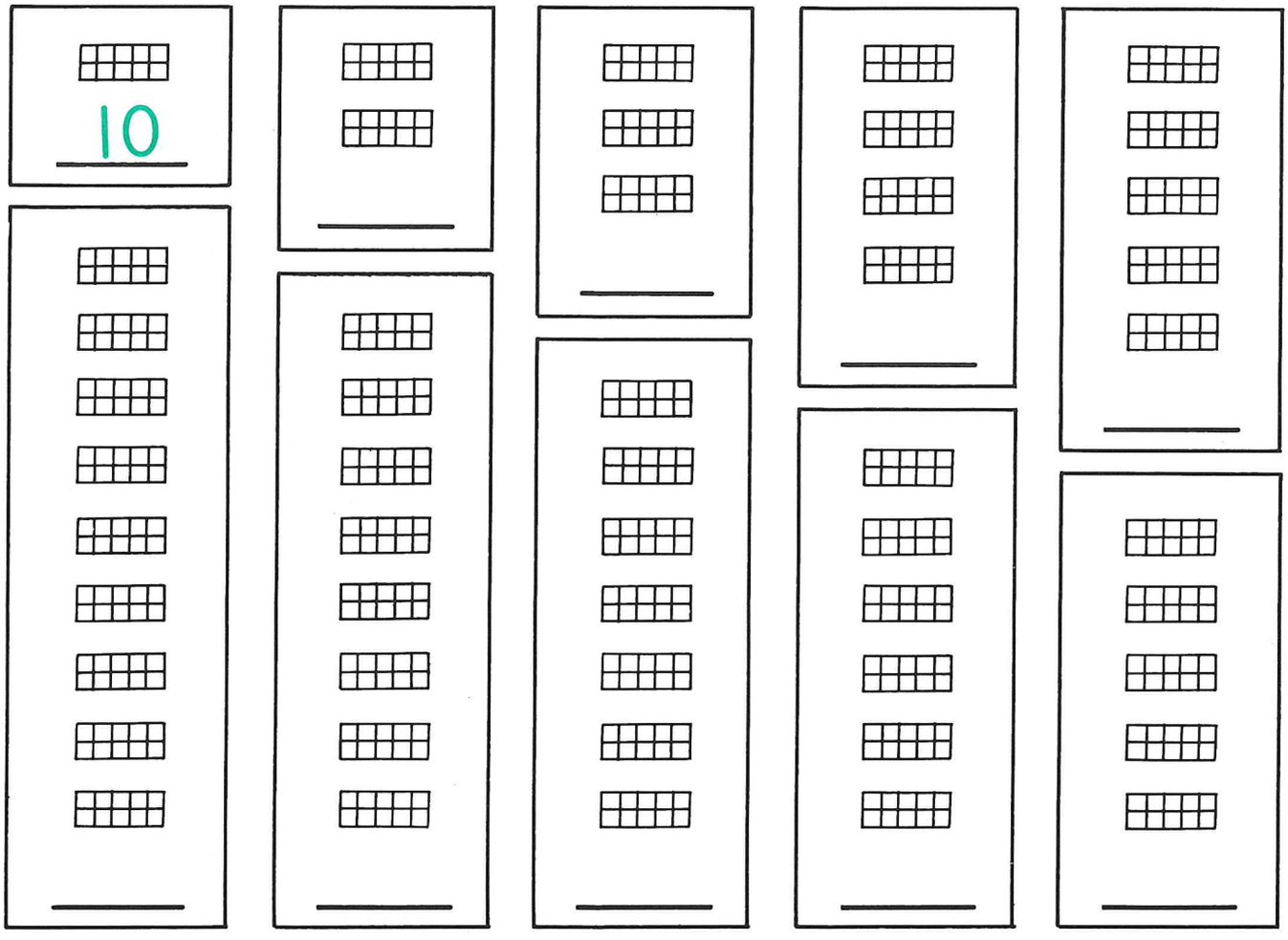
How many blocks ?



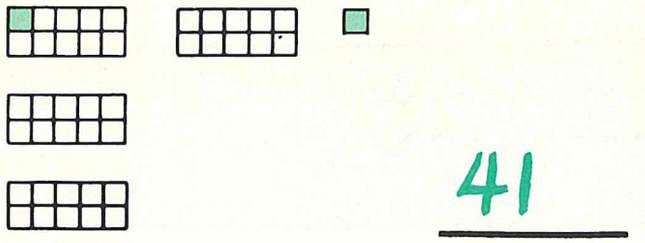
10 Blocks 20 Blocks 30 Blocks 40 Blocks

tens ? 1 ten ___ tens ___ tens ___ tens

How many blocks ?



How many blocks ?



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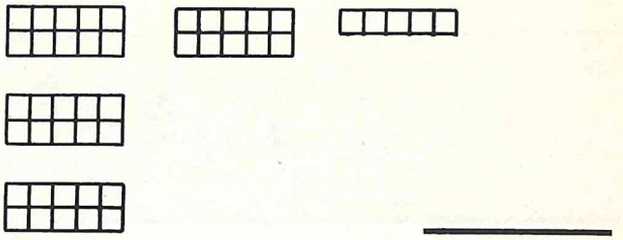
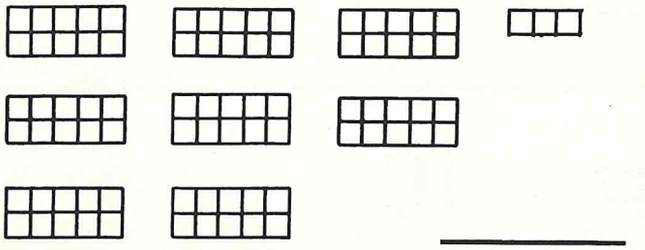
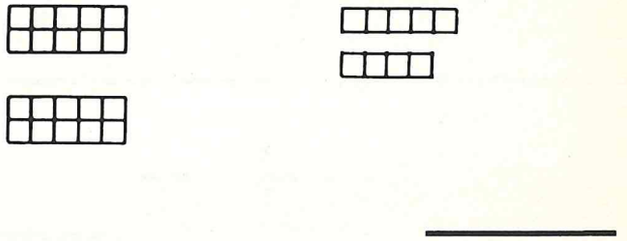
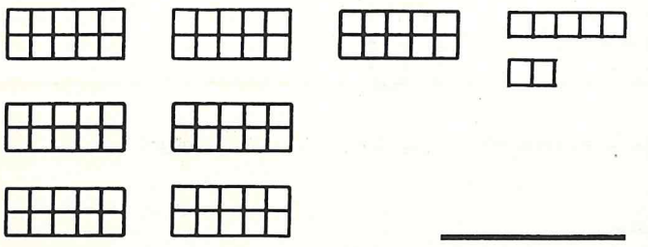
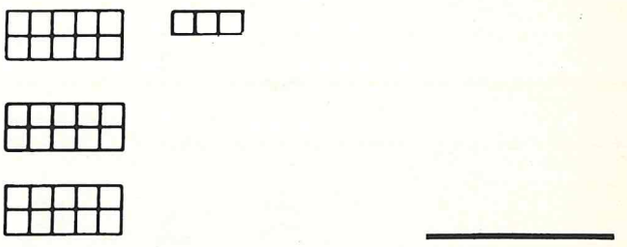
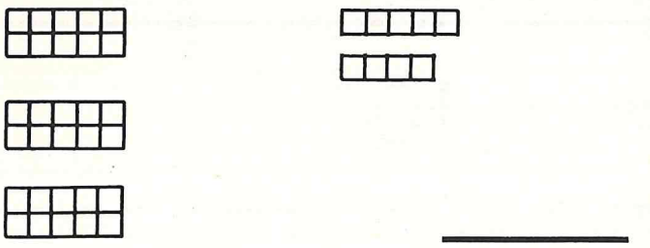


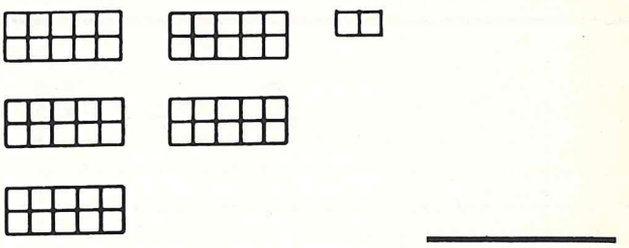


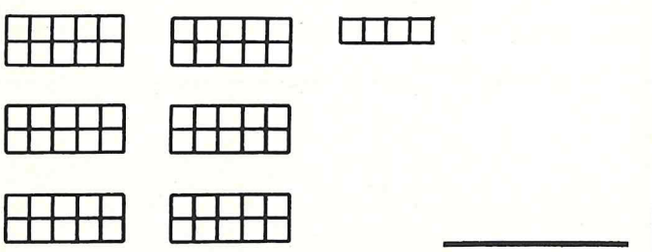


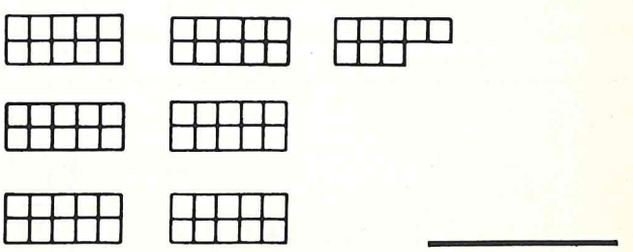


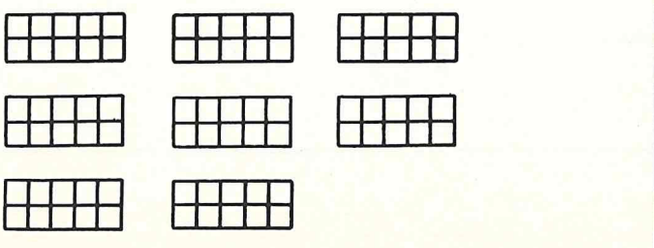


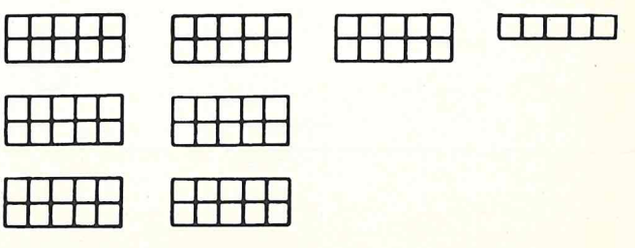












Add

3 + 7 = 10
8 + 2 = ____
4 + ___ = 10
0 + ___ = 10
5 + 5 = ____
6 + 4 = 10
7 + ___ = 10
___ + 10 = 10
___ + 8 = 10
10 + ___ = 10

30 + 70 = 100
80 + 20 = ____
40 + ____ = 100
0 + ____ = 100
50 + 50 = ____
60 + ____ = 100
70 + 30 = ____
____ + 100 = 100
____ + 80 = 100
100 + ____ = 100

Add

3 tens + 7 tens = ___ tens

30 + 70 = 100

---

5 tens + 5 tens = ___ tens

50 + 50 = ___

---

6 tens + 4 tens = ___ tens

___ + ___ = ___

---

2 tens + 8 tens = ___ tens

___ + ___ = ___

---

1 ten + 9 tens = ___ tens

___ + ___ = ___

---

7 tens + 3 tens = ___ tens

___ + ___ = ___

10 tens − 3 tens = 7 tens

100 − 30 = 70

10 tens − 5 tens = ___ tens

100 − 50 = ___

10 tens − 4 tens = ___ tens

___ − ___ = ___

10 tens − 6 tens = ___ tens

___ − ___ = ___

10 tens − 9 tens = ___ tens

___ − ___ = ___

10 tens − 2 tens = ___ tens

___ − ___ = ___

10 − 5 = ___

10 − 1 = ___

10 − ___ = 6

10 − ___ = 2

10 − ___ = 3

10 − ___ = 9

10 − 7 = ___

10 − ___ = 10

10 − 8 = ___

10 − 5 = ___

100 − 30 = ___

100 − 10 = ___

100 − ___ = 60

100 − 0 = ___

100 − ___ = 20

100 − 50 = ___

100 − ___ = 50

100 − ___ = 100

100 − 100 = ___

100 − 20 = ___

$5 + n = 10$ $n =$ ____	$10 - n = 3$ $n =$ ____
$4 + n = 10$ $n =$ ____	$10 - n = 4$ $n =$ ____
$2 + n = 10$ $n =$ ____	$10 - n = 8$ $n =$ ____
$n + 1 = 10$ $n =$ ____	$10 - n = 10$ $n =$ ____
$n + 10 = 10$ $n =$ ____	$10 - n = 1$ $n =$ ____
$n + 7 = 10$ $n =$ ____	$10 - n = 5$ $n =$ ____

$50 + n = 100$ $n =$ ____	$100 - n = 30$ $n =$ ____
$40 + n = 100$ $n =$ ____	$100 - n = 40$ $n =$ ____
$30 + n = 100$ $n =$ ____	$100 - n = 90$ $n =$ ____
$n + 20 = 100$ $n =$ ____	$100 - n = 100$ $n =$ ____
$n + 10 = 100$ $n =$ ____	$100 - n = 0$ $n =$ ____
$n + 60 = 100$ $n =$ ____	$100 - n = 80$ $n =$ ____

Finish each row

101	102							109	
111									
121									130
				145					
								199	

123 is 1 hundred 2 tens _____ ones.

119 is _____ hundred _____ ten _____ ones.

200 is _____ hundreds _____ tens _____ ones.

287 is _____ hundreds _____ tens _____ ones.

195 is _____ hundred _____ tens _____ ones.

324 is _____ hundreds _____ tens _____ ones.

425 is _____ hundreds _____ tens _____ ones.

562 is _____ hundreds _____ tens _____ ones.

741 is _____ hundreds _____ tens _____ one.

879 is _____ hundreds _____ tens _____ ones.

2 hundreds + 4 hundreds = 6 hundreds

200 + 400 = 600

5 hundreds + 3 hundreds = ____ hundreds

500 + 300 = ____

1 hundred + 7 hundreds = ____ hundreds

____ + ____ = ____

6 hundreds + 3 hundreds = ____ hundreds

____ + ____ = ____

8 hundreds + 1 hundred = ____ hundreds

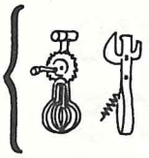
____ + ____ = ____

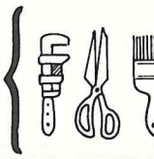
0 hundreds + 2 hundreds = ____ hundreds

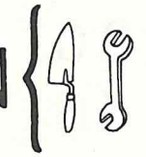
____ + ____ = ____

100 + 10 + N{ } = 111

100 + 10 + N{ } = ____

100 + 10 + N{  } = ____

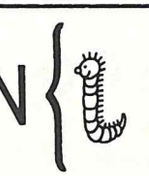
100 + 20 + N{  } = ____

200 + 10 + N{  } = ____

200 + 10 + N{ } = ____

200 + 20 + N{ } = ____

200 + 30 + N{ } = ____

300 + 40 + N{  } = ____

300 + 40 + N{ } = ____

100 + 10 110	100 + 15 _15	100 + 7 __7	100 + 3 ___
100 + 9	100 +25	100 +31	100 + 99
200 + 10	200 + 30	200 +15	200 +59
200 +123	200 +176	200 +90	200 +155
300 +215	300 +275	300 +300	300 +299

Finish each row

10	20	30					
5	10	15					
85	80	75					
16	14	12					
3	6	9					
4	8	12					
90	80	70					

first second third fourth fifth sixth

seventh eighth ninth tenth eleventh twelfth

Months of the Year

January	third
February	sixth
March	first
April	fourth
May	ninth
June	second
July	twelfth
August	fifth
September	eighth
October	eleventh
November	seventh
December	tenth

March is the _____ month of the year.

November is the _____ month of the year.

The fifth month of the year is _____.

The seventh month of the year is _____.

Days of the week

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

On the calendar

Sunday is the first day of the week.

Monday is the _____ day of the week.

Tuesday is the _____ day of the week.

Wednesday is the _____ day of the week.

Thursday is the _____ day of the week.

Friday is the _____ day of the week.

Saturday is the _____ day of the week.

The second day of the week is _____.

The fourth day of the week is _____.

The first day of the week is _____.

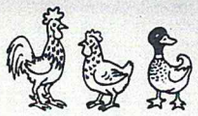
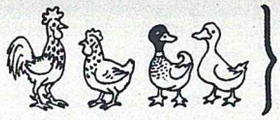
The seventh day of the week is _____.

The fifth day of the week is _____.

The sixth day of the week is _____.

The third day of the week is _____.

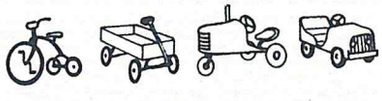
Review

{  } U ..... = {  }

□{ } □{ } □{ }

{Paul} U {Alan} = _____

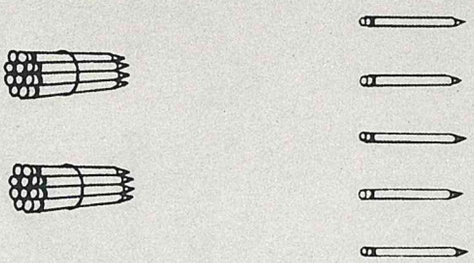
{Jim, Tom} U _____ = {Jim, Gary, Tom}

{  } — { } = ...

□{ } □{ } □{ }

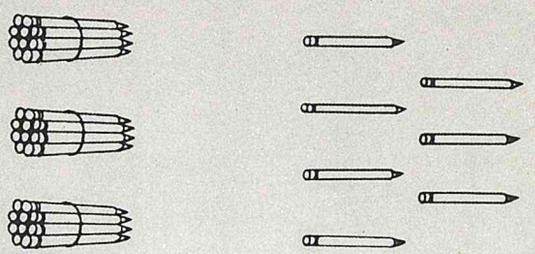
{Tim, Paul, Sara, } — {Tim,Paul} = _____

{Tom, Bill, Pat} — _____ = {Tom, Bill}



____ tens ____ ones

____ in all



____ tens ____ ones

____ in all

79 is ____ tens and ____ ones.

$10 - n = 4$

$n =$ ____

$10 - n = 8$

$n =$ ____

$7 + ____ = 11$

$9 + ____ = 17$

$4 + ____ = 15$

$3 + ____ = 12$

$6 + ____ = 14$

$5 + ____ = 18$

$8 + ____ = 13$

$12 - 4 =$ ____

$14 - 7 =$ ____

$18 - 6 =$ ____

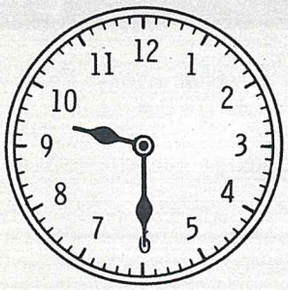
$13 - 6 =$ ____

$19 - 5 =$ ____

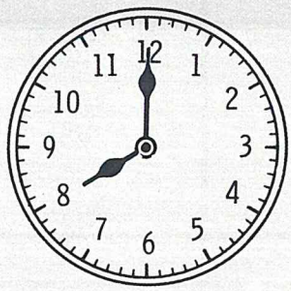
$11 - 9 =$ ____

$15 - 6 =$ ____

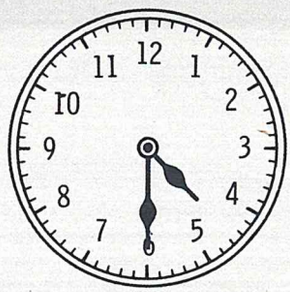
Review



_____ o'clock



_____ o'clock



_____ o'clock

_____ cents

13	8	11	13	4	9
+2	+6	+9	+3	+7	+8
____	____	____	____	____	____

$13 - n = 8$

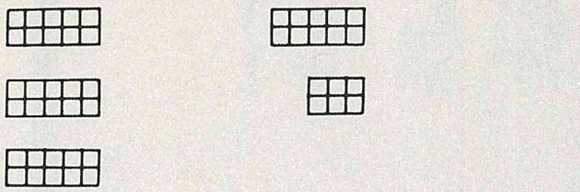
$n =$ ____

$17 - n = 9$

$n =$ ____

13	14	16	11	19	15
−0	−7	+3	+7	−12	−10
____	____	____	____	____	____

How many blocks?



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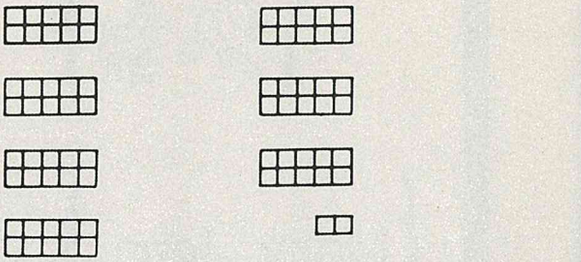


___

$40 + 60 = ___$

$30 + ___ = 100$

$100 - 80 = ___$

729 is ___ hundreds ___ tens ___ ones.

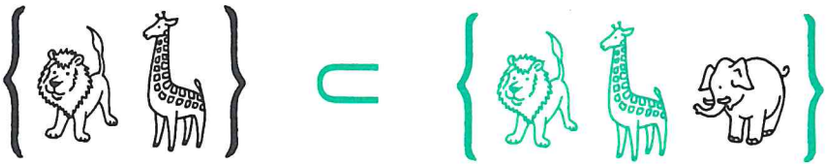
$n + 10 = 100$

$n = ___$

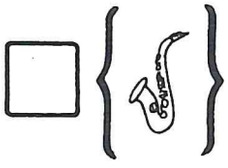
$100 - n = 50$

$n = ___$

$$\begin{array}{r} 300 \\ +\ 19 \\ \hline \end{array} \qquad \begin{array}{r} 200 \\ +\ 43 \\ \hline \end{array} \qquad \begin{array}{r} 100 \\ +\ 51 \\ \hline \end{array} \qquad \begin{array}{r} 300 \\ +\ 78 \\ \hline \end{array}$$



{ Mary, John } ⊂ { Dick, Mary, John }

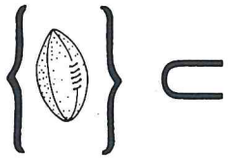
☐ 

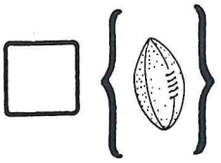
☒

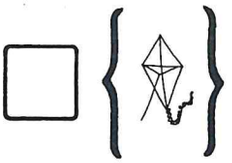
☐

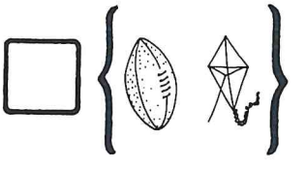
{ Mary } ⊂ .....

☐ { Mary, Jane } ☐ { John, Jane } ☐ { Mary }

 ⊂ .....

☐ 

☐ 

☐ 

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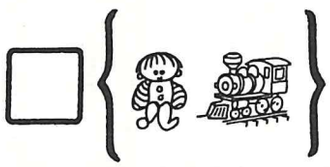
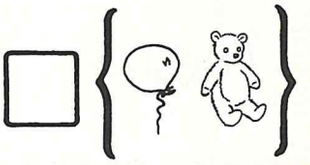
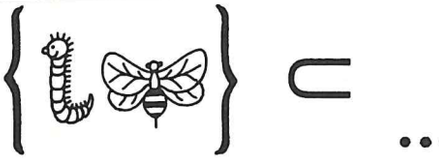
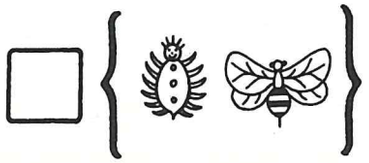
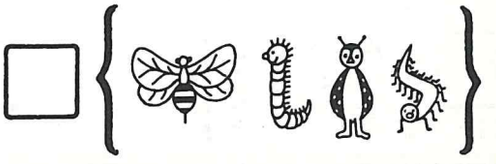
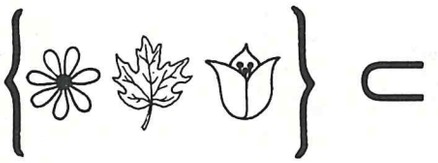
□ 

□ 

 ⊂ .....

□ 

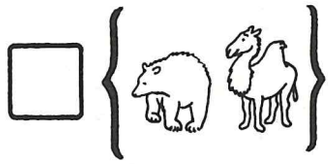
□ 

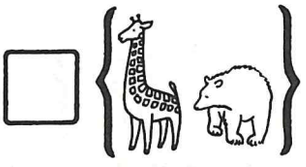
 ⊂ .....

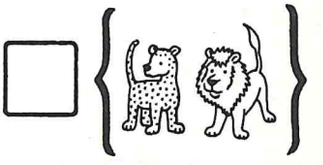
□

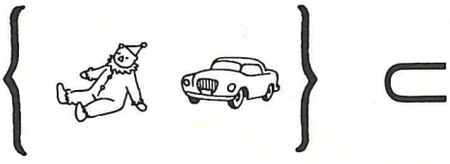
□

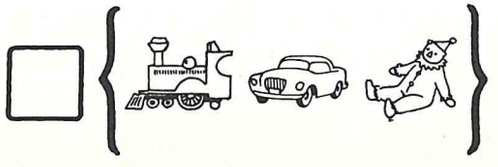
⊂ .....

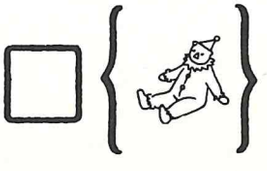
□ 

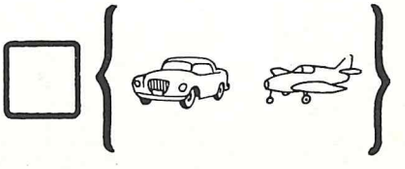
□ 

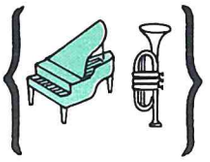
□ 

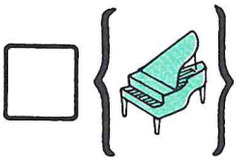
 ⊂ .....

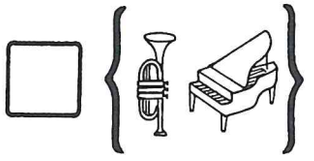
□ 

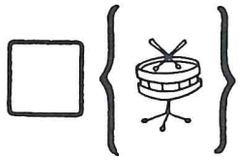
□ 

□ 

..... ⊂ 

□ 

□ 

□ 

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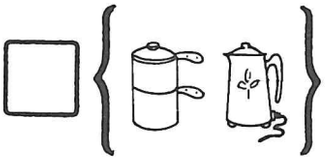
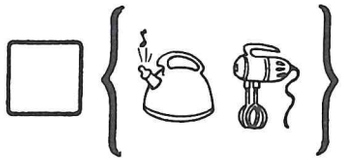
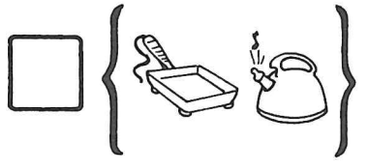
□ 

□ 

□ 

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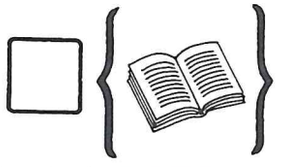
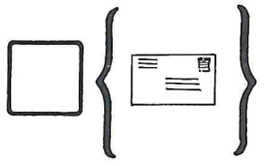
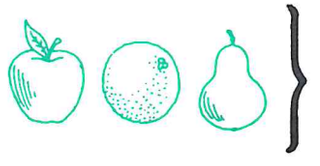
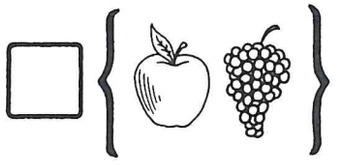
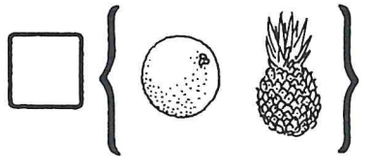
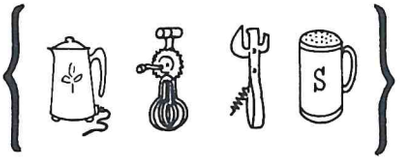
□ 

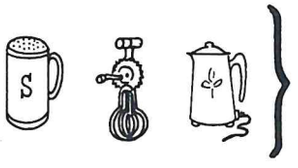
□ 

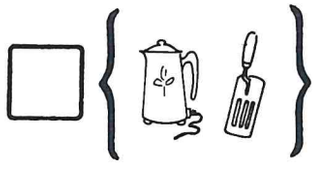
..... ⊂ 

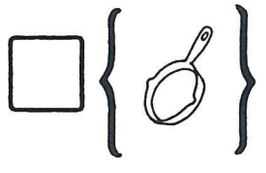
□ □ 

□ 

..... ⊂ 

□ 

□ 

□ 

{John} ⊂ .....

☐ {Bill, Mary} ☐ {John, Susan} ☐ {John}

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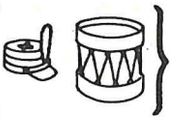
☐ ☐  ☐

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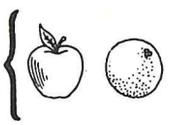
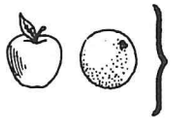
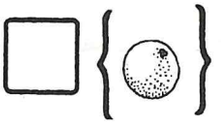
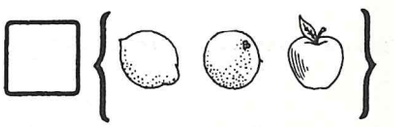
☐ {Susan} ☐ {Bill, Susan} ☐ { }

 ⊂ .....

☐  ☐  ☐ 

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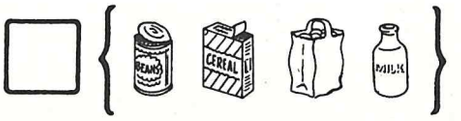
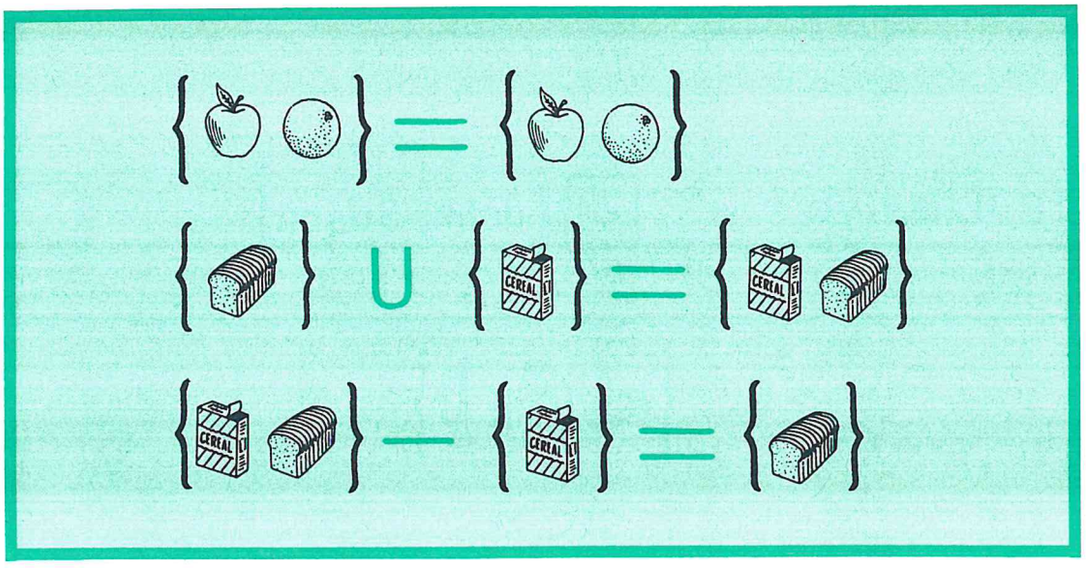
☐ { } ☐ 

Subsets and equal sets.



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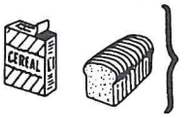
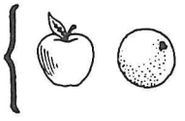
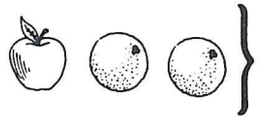
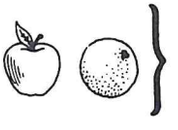
☐ $\{$ $\}$ ☐ $\{$  $\}$ ☐ $\{\ \}$

$\{$  $\} =$ .....

☐ $\{$  $\}$ ☐ $\{$  $\}$ ☐ $\{$ $\}$

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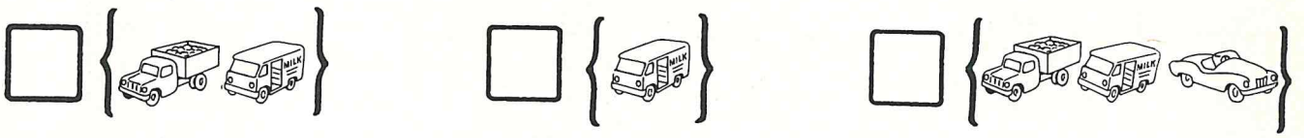

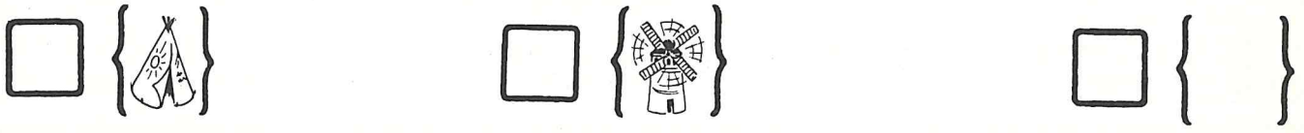

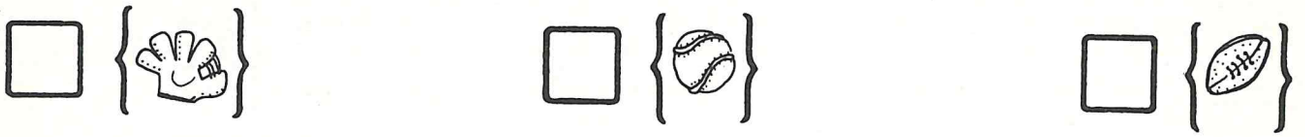

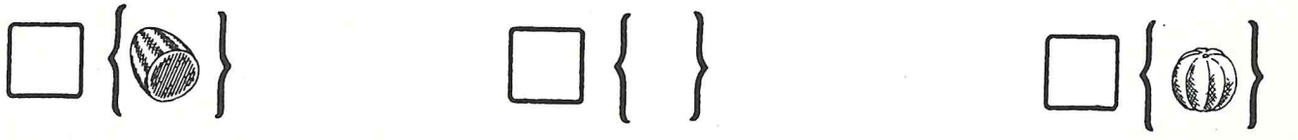

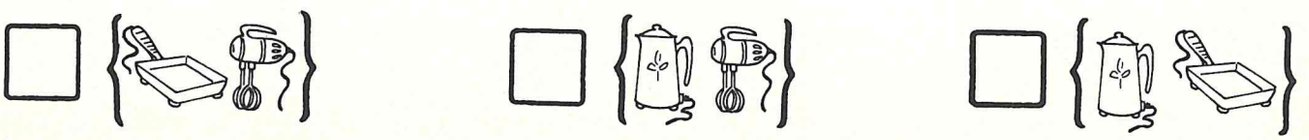

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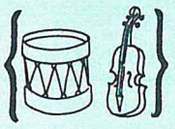
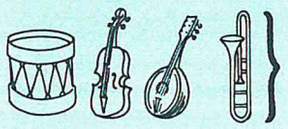
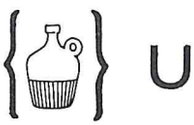
☐  ☒  ☐ { }

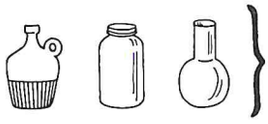
{Mary} ∪ {Jane} ⊂ .....

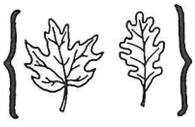
☐ {Mary, Jane, Susan} ☐ {Jane} ☐ {Mary, Jane}

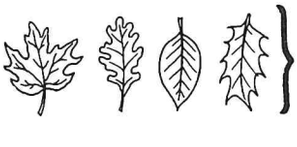
∪ { } ⊂ .....

☐ { } ☐ ☐

 ∪ ⊂ .....

☐  ☐ ☐ { }

{ } ∪  ⊂ .....

☐ ☐ ☐ 

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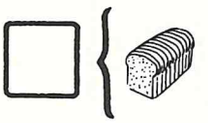
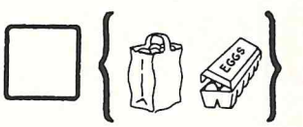
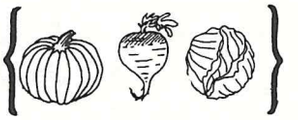
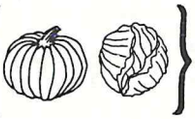
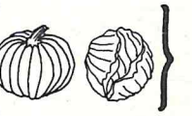
☐ { } ☐ {  } ☐ {  }

{ Mary } ∪ ..... ⊂ { Dick, Mary, Jane }

☐ { Tom } ☐ { Mary, Bill } ☐ { Jane }

{ } ∪ ..... ⊂ {  }

☐ { } ☐ {  } ☐ {  }

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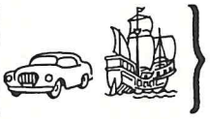
☐ {  } ☐ { } ☐ { }

{ } ∪ ..... ⊂ { Jane, Mary }

☐ { Jane, Mary } ☐ { Bill } ☐ { Mary }

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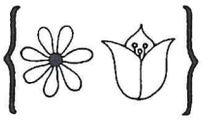
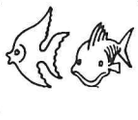
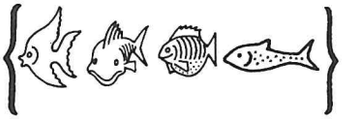
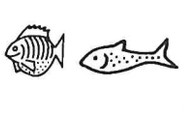
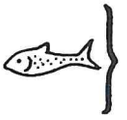
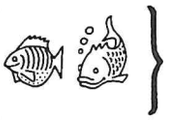
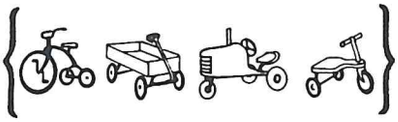
☐ { } ☐ { } ☐ {  }

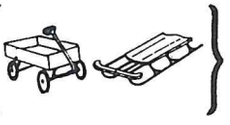
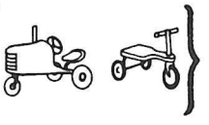
..... $\cup$ {Bill} $\subset$ {Tom, Bill, Joe}

☐ {Tom} ☐ {Joe, Mary} ☐ {Bill, Susan}

..... $\cup$ {  } $\subset$ {  }

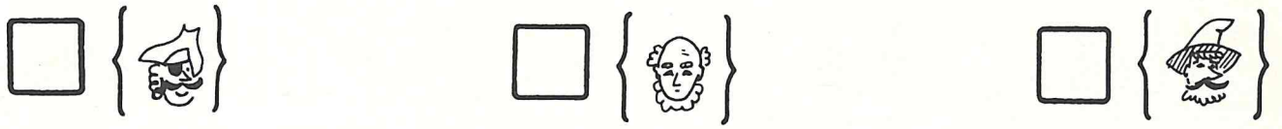
☐ {  } ☐ {  } ☐ {  }

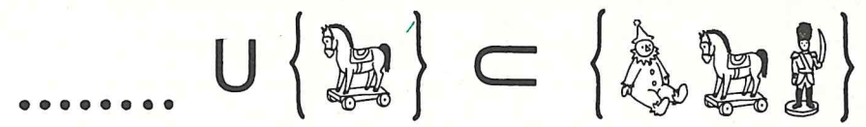
..... $\cup$ { } $\subset$ {  }

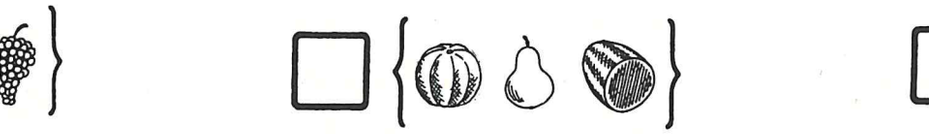
☐ {  } ☐ {  } ☐ { }

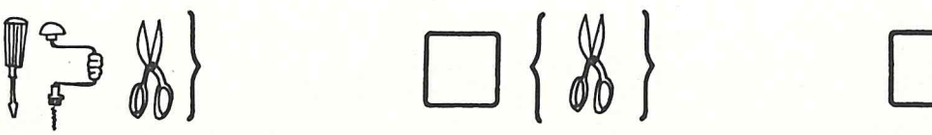
..... $\cup$ {Sally} $\subset$ {Mary, Sally}

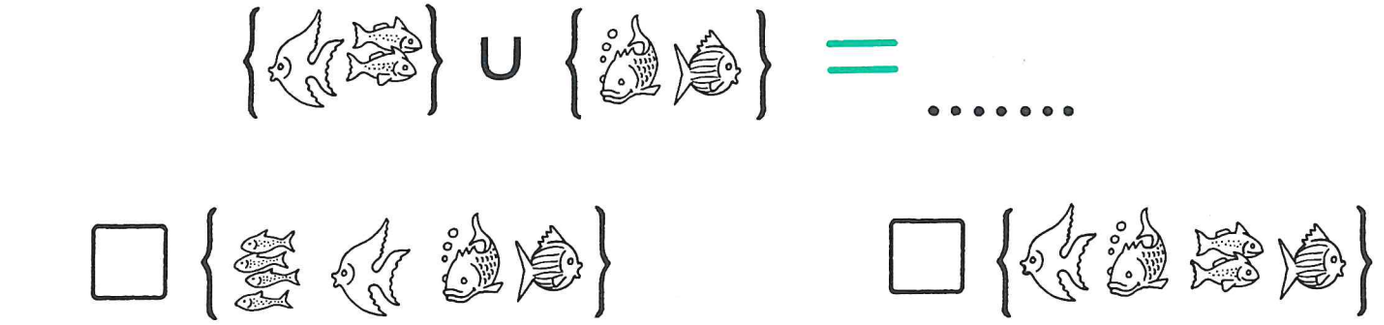
☐ {Mary} ☐ {Sally, Jane} ☐ { }

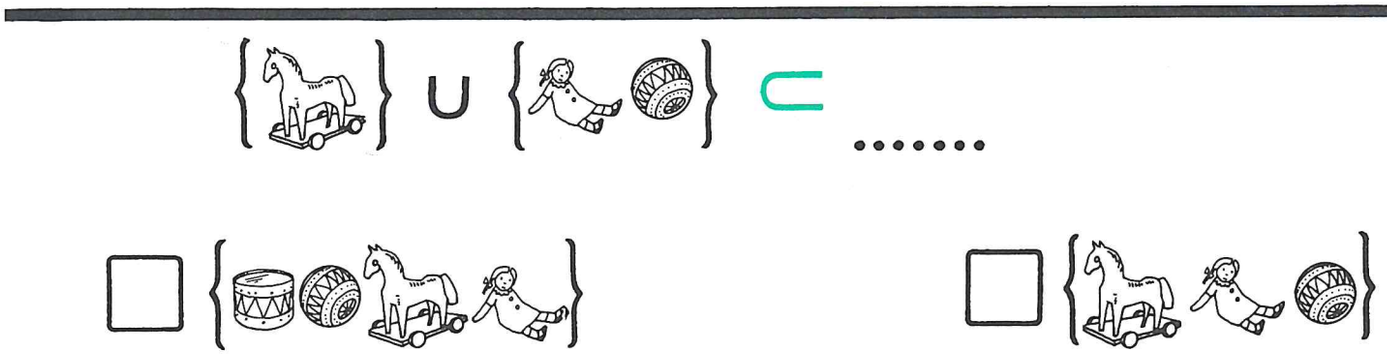


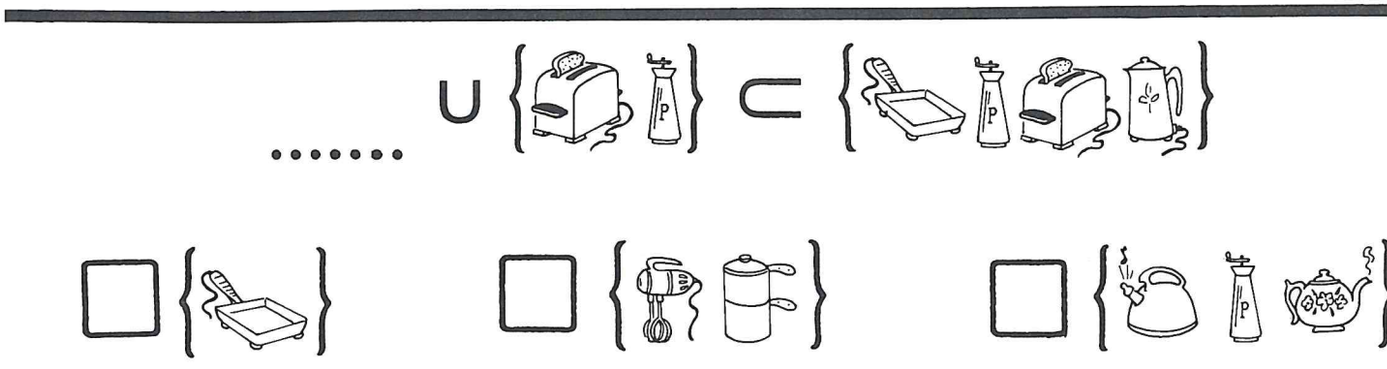


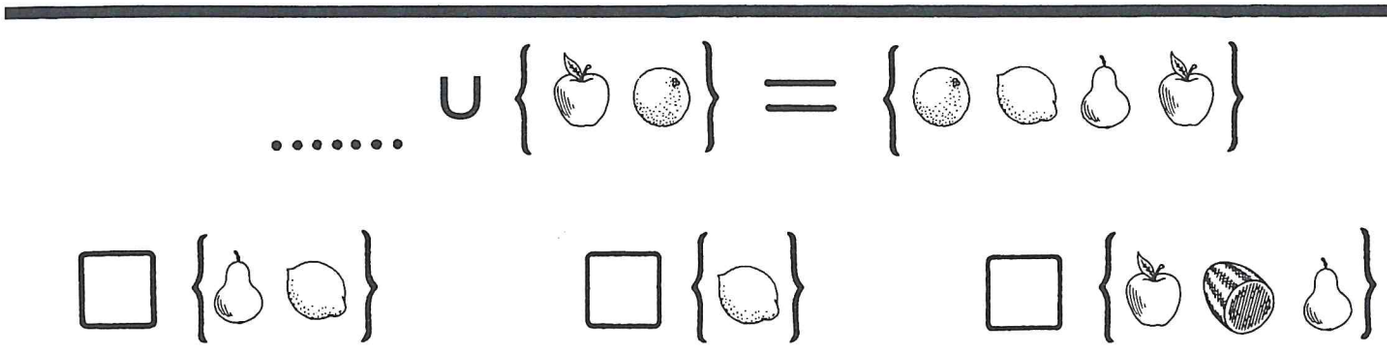


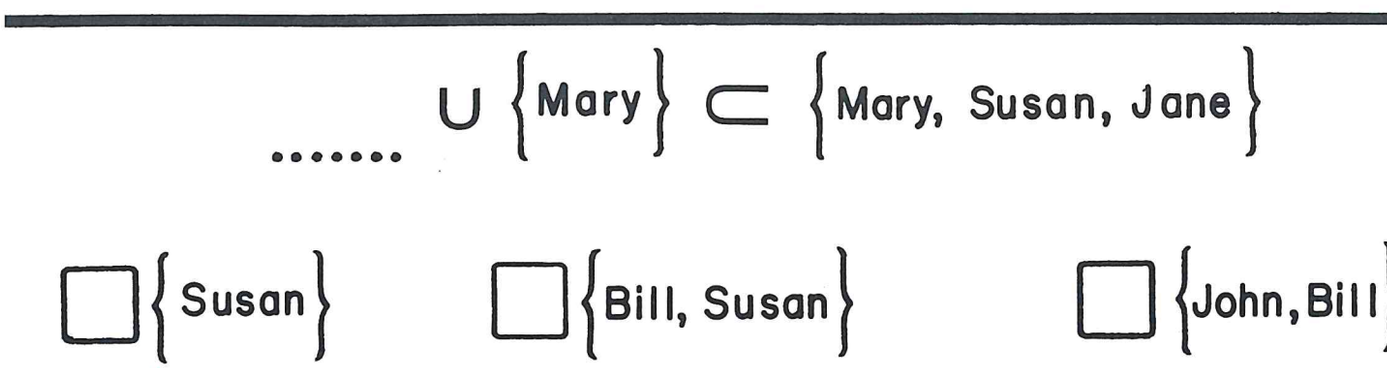


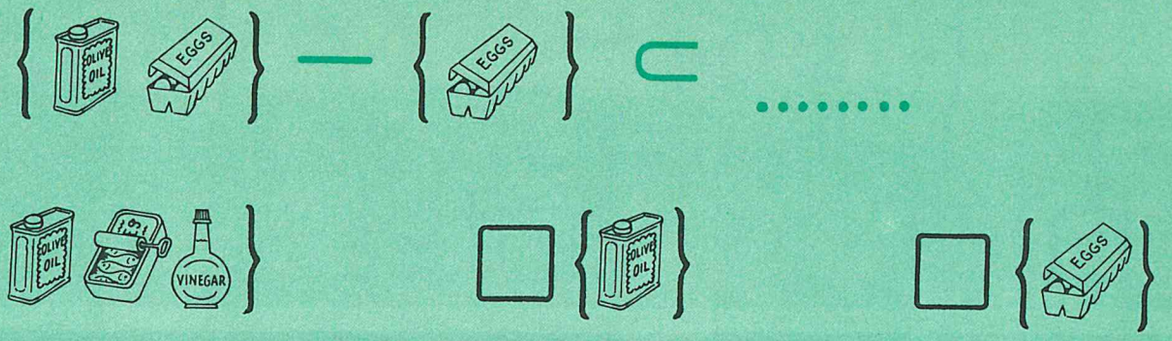


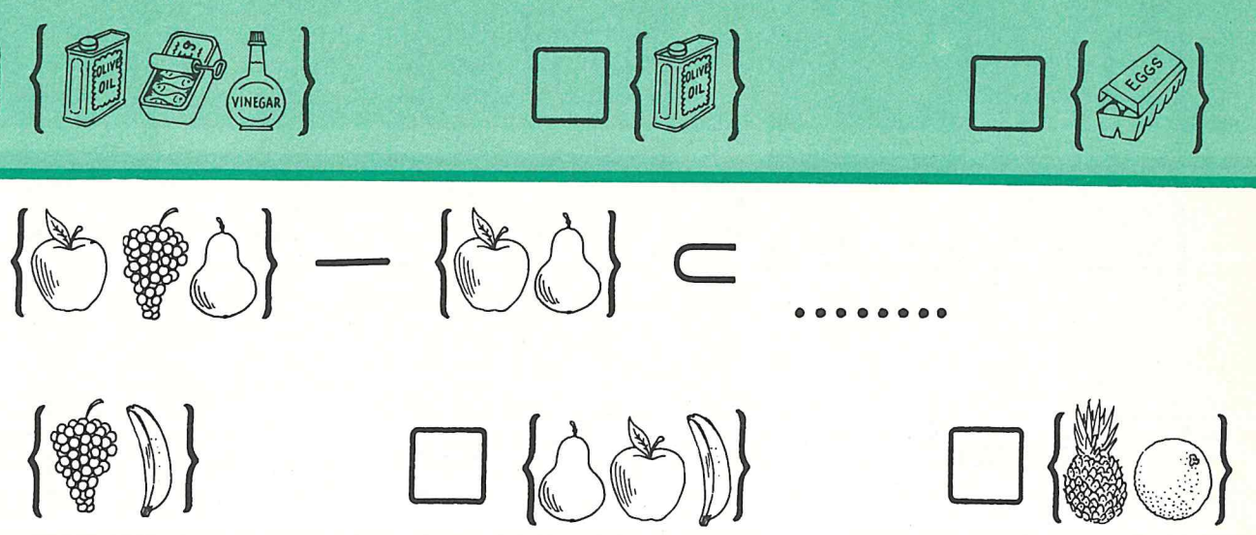


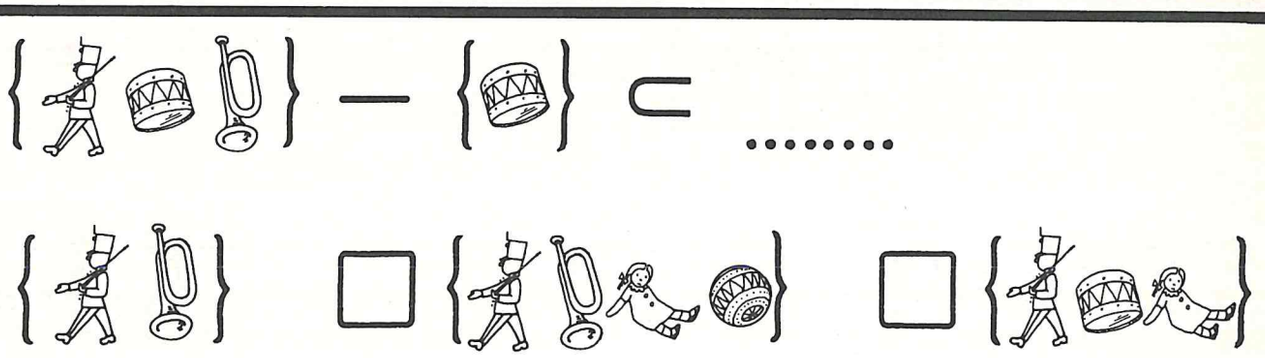


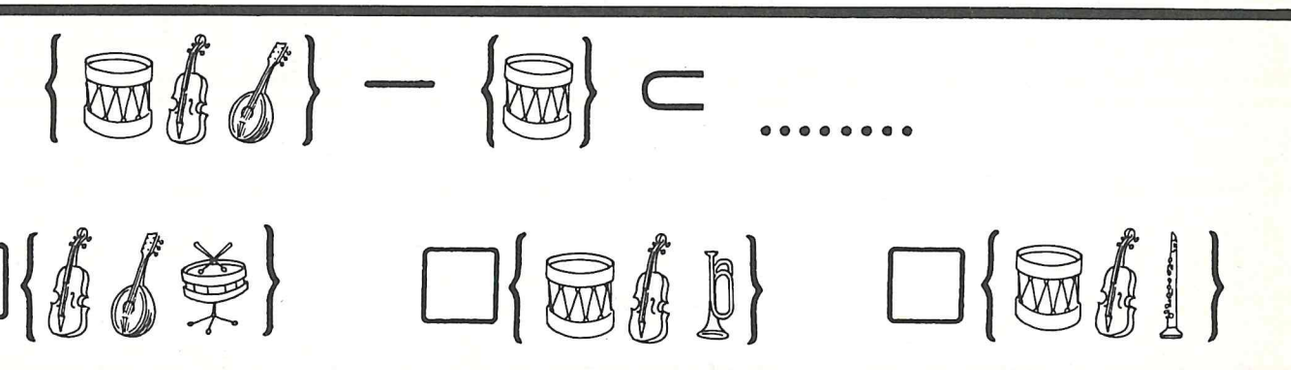


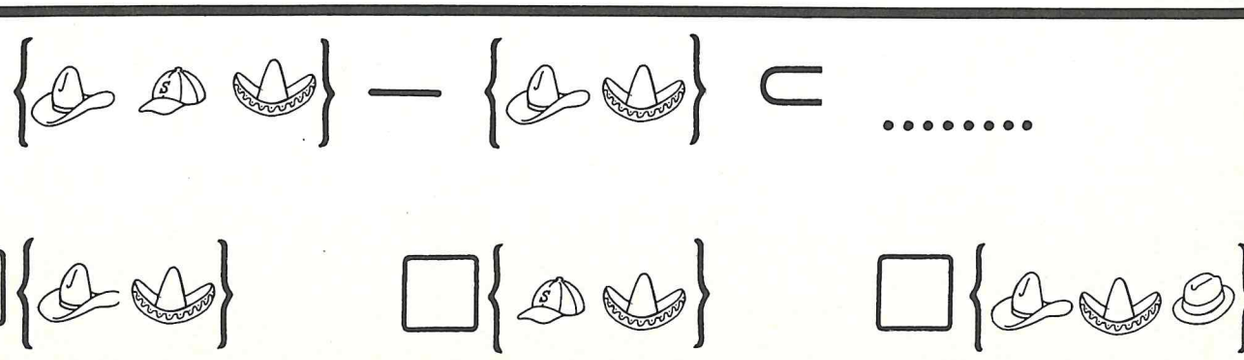


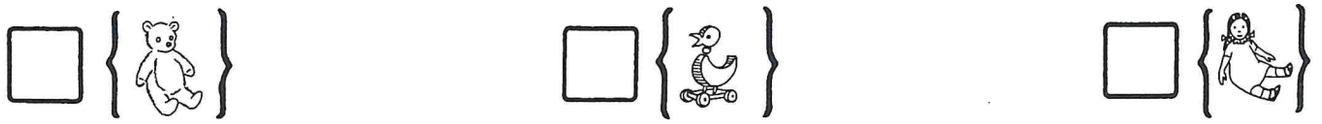

OLIVE OIL
EGGS
EGGS
OLIVE OIL
VINEGAR
OLIVE OIL
EGGS





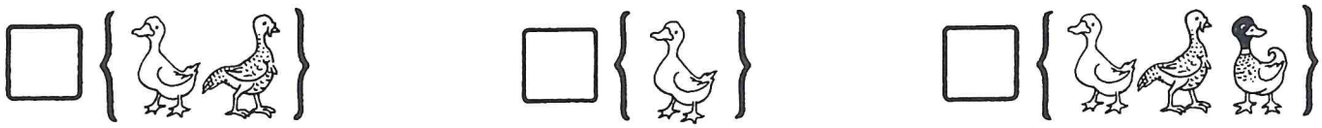


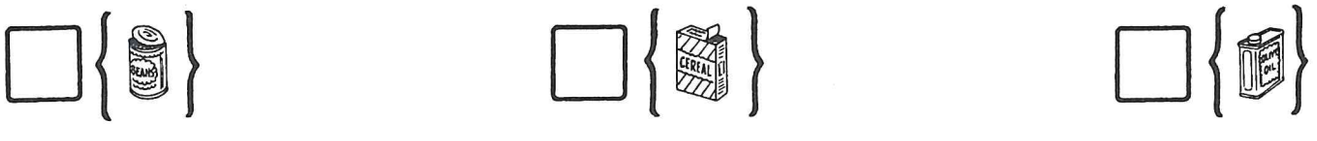




{Mary, Susan, Sally} — ..... ⊂ {Susan, Sally, Bill}

□{Susan} □{Mary} □{Sally}





{Joe, Bill, Tom} — ..... ⊂ {Joe, Tom}

□{Bill, Tom} □{ } □{Bill, Sam}

N{ } + 10 = _____

{Fred, Roy} U {Dan} = {_____}

{Donna, Ann, Mary} — {Donna} = {_____}

{Dave, Jim, Gay} U {_____} = {Dave, Jim, Gay}

{Sue, Nan} — {_____} = {Sue}

$10 - n = 6$

$n =$ ___

$100 - n = 80$

$n =$ ___

Count by fives

Twelve plus seven equals _____

Review

147 is ____ hundred ____ tens ____ ones

231 is ____ hundreds ____ tens ____ one

275 is ____ hundreds ____ tens ____ ones

499 is ____ hundreds ____ tens ____ ones

501 is ____ hundreds ____ tens ____ one

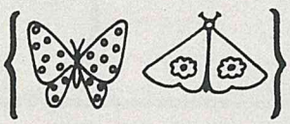
100 + 70	100 +115	121 +105	161 +125

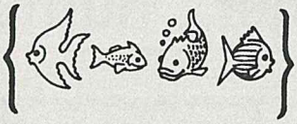
201 +103	212 +121	257 +132	289 +100

305 +104	400 +120	400 +301	500 +200

18 inches are equal to ___ foot and ___ inches.

17 cents = _____ dime _____ cents

100 + 20 + N{  } = _____

400 + 50 + N{  } = _____

Finish each row

22	20									
100	90									

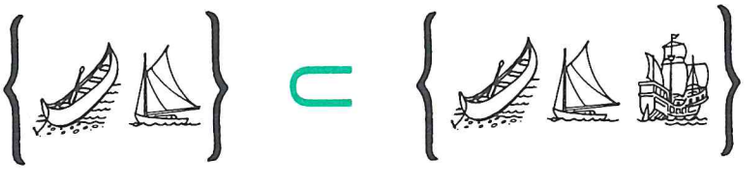
The second month of the year is _____.

The fourth month of the year is _____.

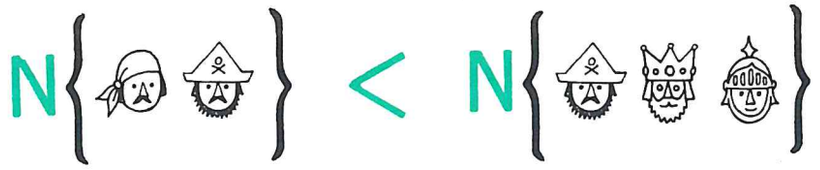
March is the _____ month of the year.

July is the _____ month of the year.

Some sets are subsets of other sets.

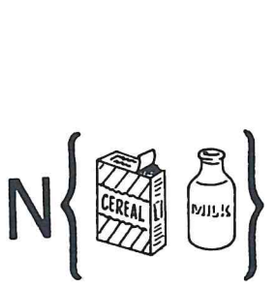


Some numbers are less than other numbers.



☐ N{ }

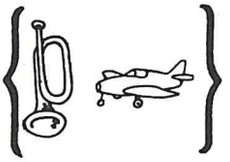
☒ N{ }



☐ N{ }

☐ N{ }

N{ } < .....

☐N{  }

☐N{ }

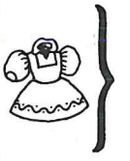
N{ } < .....

☐N{ }

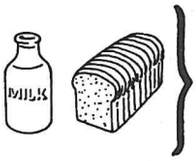
☐N{ }

..... < N{ }

☐N{ }

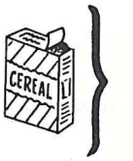
☐N{  }

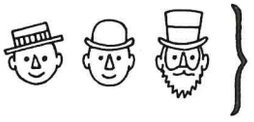
☐N{ }

..... < N{  }

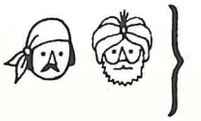
☐N{ }

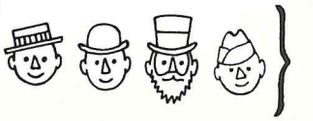
☐N{ }

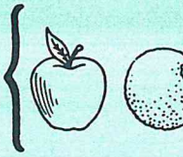
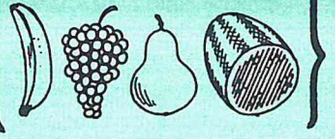
☐N{  }

..... < N{  }

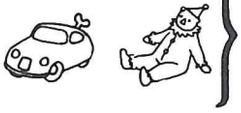
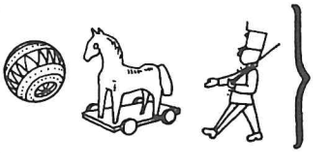
☐N{ }

☐N{  }

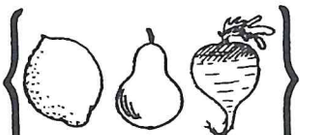
☐N{  }

N{  } < N{  }

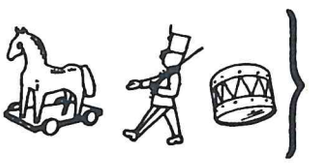
3 < 4

N{  } < N{  }

____ < ____

N{ } < N{  }

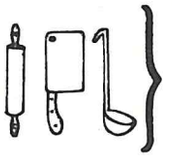
____ < ____

N{ } < N{  }

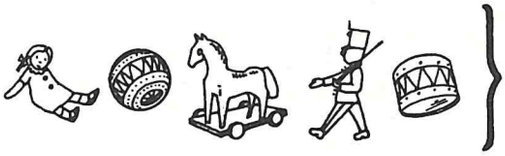
____ < ____

N{ } < .....

☐ 1 ☐ 2 ☒ 3

N{  } < .....

☐ 2 ☐ 1 ☐ 4

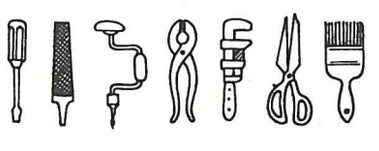
N{  } < .....

☐ 4 ☐ 6 ☐ 5

N{

} < .....

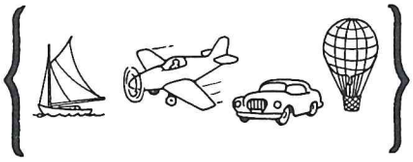
☐ 5 ☐ 3 ☐ 2

N{  } < .....

☐ 4 ☐ 6 ☐ 8

..... < N { }

☒ 2 ☐ 4 ☐ 5

..... < N {  }

☐ 5 ☐ 0 ☐ 6

..... < N { }

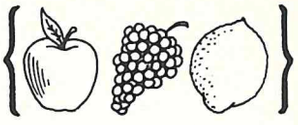
☐ 5 ☐ 3 ☐ 1

..... < N { }

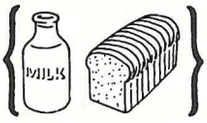
☐ 0 ☐ 6 ☐ 9

..... < N { Mary, John, Bill }

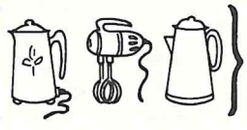
☐ 1 ☐ 7 ☐ 10

N{ } + N{ } = 2 < N{  }

1 + 1 = 2 < 3

N{  } + N{ } =3 < N{ }

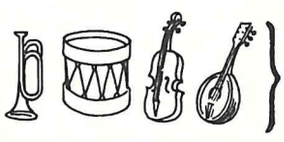
___ + ___ < ___

N{ } + N{ } < N{  }

___ + ___ < ___

N{Mary, John} + N{Tom} < N{ }

___ + ___ < ___

N{ } + N{ } < N{  }

___ + ___ < ___

$1 + 1 <$ .....

- ☐ 0
- ☐ 1
- ☐ 3

$3 + 4 <$ .....

- ☐ 6
- ☐ 7
- ☐ 10

$10 + 2 <$ .....

- ☐ 20
- ☐ 10
- ☐ 5

$20 + 5 <$ .....

- ☐ 40
- ☐ 20
- ☐ 15

$100 + 10 <$ .....

- ☐ 80
- ☐ 90
- ☐ 120

N{ } + N{ } < .....

☐1 ☐2 ☐6

N{ } + N{ } < .....

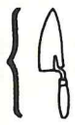
☐2 ☐5 ☐3

N{ } + N{ } < .....

☐7 ☐0 ☐3

N{ } + N{ } < .....

☐2 ☐8 ☐4

N{ } + N{  } + N{ } < .....

☐4 ☐7 ☐0

..... < N{ } + N{ }

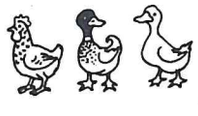
☐3 ☐8 ☐1

..... < N{ } + N{ }

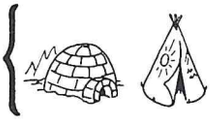
☐0 ☐9 ☐4

..... < N{ } + 1

☐3 ☐5 ☐7

..... < N{  } + 2

☐6 ☐8 ☐4

..... < 5 + N{  }

☐6 ☐8 ☐9

$2 + 3 < \ldots\ldots$ ☐ 7 ☐ 4	$\ldots\ldots < 2 + 5$ ☐ 5 ☐ 10
$5 + 5 < \ldots\ldots$ ☐ 9 ☐ 20	$\ldots\ldots < 10 + 5$ ☐ 10 ☐ 20
$10 + 3 < \ldots\ldots$ ☐ 10 ☐ 20	$\ldots\ldots < 20 + 1$ ☐ 30 ☐ 20
$20 + 4 < \ldots\ldots$ ☐ 30 ☐ 10	$\ldots\ldots < 15 + 22$ ☐ 40 ☐ 10
$30 + 7 < \ldots\ldots$ ☐ 30 ☐ 100	$\ldots\ldots < 200 + 200$ ☐ 300 ☐ 500

$1 + _1_ < 3$ OR $1 + _0_ < 3$

$10 + 3 < ____$	$2 + ____ < 5$
$100 + 10 < ____$	$10 + ____ < 13$
$100 + 100 < ____$	$10 + ____ < 20$
$50 + 7 < ____$	$90 + ____ < 100$
$____ < 60 + 3$	$15 < 10 + ____$
$____ < 100 + 50$	$110 < 100 + ____$
$____ < 200 + 100$	$555 < 500 + ____$
$____ < 500 + 100$	$650 < 500 + ____$
$____ < 400 + 400$	$721 < 400 + ____$

This sign = is called the equal sign.

This sign < is called the less than sign.

Put in the missing signs.

5 + 5	< 11	11 + 7	18
7 + 6	13	3 + 14	18
8 + 4	14	5 + 11	18
9 + 3	13	12 + 6	18
7 + 8	15	5 + 6	11
9 + 9	18	4 + 9	14
6 + 9	19	2 + 13	15
12 + 0	13	9 + 5	15
7 + 9	16	13 + 5	19
8 + 9	19	12 + 12	24
6 + 8	14	15 + 15	31

$y < 2$

$y =$ 0 or 1

$y < 3$

$y =$ _____ or _____ or _____

$1 < y$ and $y < 4$

$y =$ 2 or 3

$1 < y$ and $y < 5$

$y =$ _____ or _____ or _____

$2 < y$ and $y < 6$

$y =$ _____ or _____ or _____

$3 < y$ and $y < 8$

$y =$ _____ or _____ or _____ or _____

$10 < y$ and $y < 13$

$y =$ _____ or _____

$20 < y$ and $y < 22$

$y =$ _____

$100 < y$ and $y < 104$

$y =$ _____ or _____ or _____

$159 < y$ and $y < 162$

$y =$ _____ or _____

$276 < y$ and $y < 280$

$y =$ _____ or _____ or _____

$893 < y$ and $y < 898$

$y =$ _____ or _____ or _____ or _____

$m + 1 < 3$

$m =$ 0 or 1

$m + 1 < 4$

$m =$ _____ or _____ or _____

$y + 2 < 5$

$y =$ _____ or _____ or _____

$y + 0 < 3$

$y =$ _____ or _____ or _____

$m + 2 < 3 + 1$

$m =$ _____ or _____

$m + 8 < 10$

$m =$ _____ or _____

$10 < y$ and $y < 14$

$y =$ 11, 12, 13

$100 < y$ and $y < 103$

$y =$ _____

$107 < y$ and $y < 111$

$y =$ _____

$279 < y$ and $y < 285$

$y =$ _____

$724 < y$ and $y < 732$

$y =$ _____

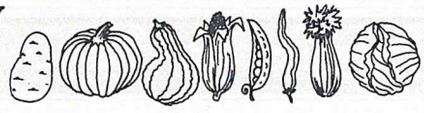
$995 < y$ and $y < 1000$

$y =$ _____

Review

{Bill} U {John, Jane} = { _____ }

{Susan, Mary} U { _____ } = {Mary, Susan, Jane}

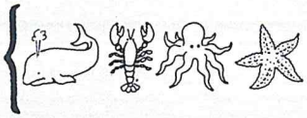
N{  } = _____

Finish the row

4	8	12					

N{ } + N{ } = _____

N{ } + _____ = 9

12 + N{  } = _____

_____ + N{ } = 19

7	6	6	9
+9	+5	+8	+4

$16 + m = 19$

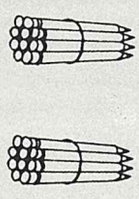
$m =$ ____

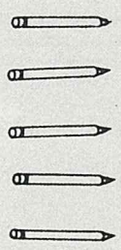
$5 + m = 17$

$m =$ ____

$7 + 4 = 3 +$ ____

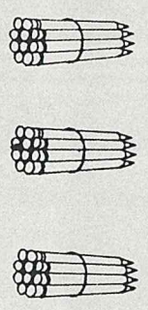
$8 + 6 = 4 +$ ____





____ tens ____ ones

____ in all

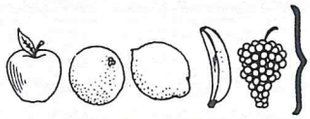


____ tens ____ ones

____ in all

Review

{John, Mary, Dick} − {Mary} = { _____ }

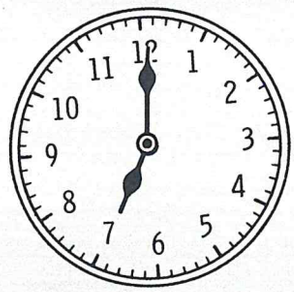
N{  } − N{ } = _____

18 − 6 = ___	14 − ___ = 12
15 − 7 = ___	16 − ___ = 10

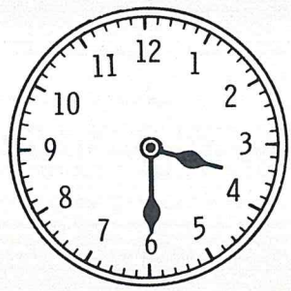
Eleven plus five is _____.

_____ cents

_____ cents



_____ o'clock



_____ o'clock

Count by threes

3									

$20 + ____ = 100$

$100 - 50 = ____$

965 is ____ hundreds ____ tens ____ ones

$$\begin{array}{r} 200 \\ +\ 65 \\ \hline \end{array} \qquad \begin{array}{r} 300 \\ +284 \\ \hline \end{array} \qquad \begin{array}{r} 400 \\ +\ 179 \\ \hline \end{array} \qquad \begin{array}{r} 500 \\ +\ 309 \\ \hline \end{array}$$

$100 - n = 60$

$n = ____$

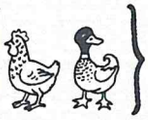
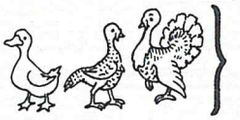
$n + 10 = 100$

$n = ____$

$$\begin{array}{r} 100 \\ 20 \\ +\ 20 \\ \hline \end{array} \qquad \begin{array}{r} 200 \\ 35 \\ +\ 32 \\ \hline \end{array} \qquad \begin{array}{r} 400 \\ 27 \\ +\ 41 \\ \hline \end{array} \qquad \begin{array}{r} 600 \\ 70 \\ +\ 29 \\ \hline \end{array}$$

Review

$\{$ $\} \subset$ .....

☐ $\{$ $\}$ ☐ $\{$  $\}$ ☐ $\{$  $\}$

$\{\text{John}\} \cup \{\text{Bill}\} \subset \{$ _____ $\}$

$N\{$ $\} <$ .....

☐ 0
☐ 5
☐ 10

$200 + 50 <$ .....

☐ 200
☐ 240
☐ 300

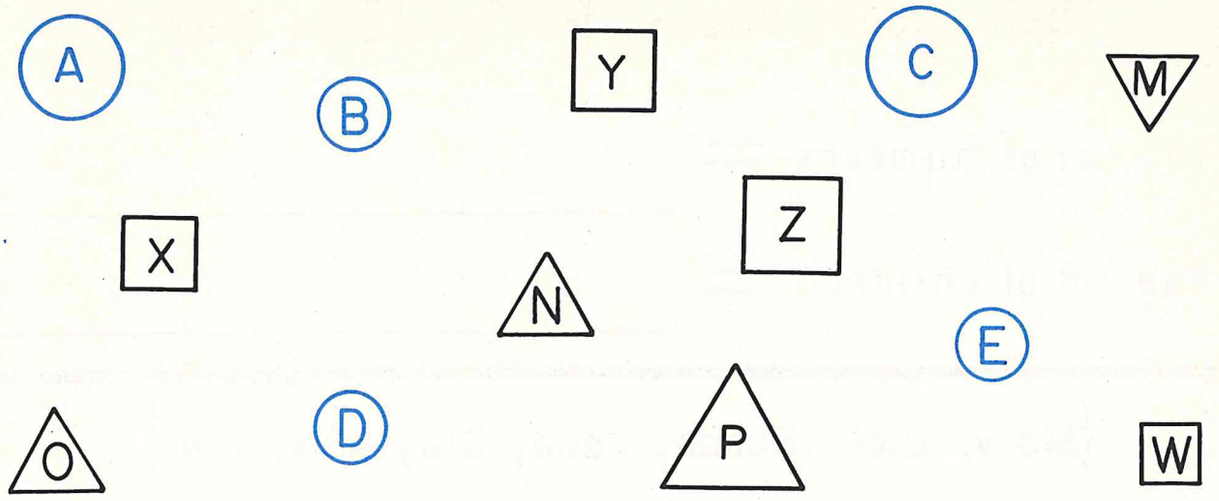
$170 < y$ and $y < 174$

$y =$ _____ or _____ or _____

$y + 3 < 6$

$y =$ _____ or _____ or _____

Part II Finding sets



The set of circles = {A, B, C, D, E}

(Complete the braces.)

The set of triangles = { _____ }

The set of squares = _____

{John, Mary, Dick, Susan, Bill, Joe}

The set of boys = _____

The set of girls = _____

{1, John, 3, 6, Mary, Susan}

The set of numbers = _____

The set of children = _____

(Did you remember to make the braces?)

{501, John, Susan, 993, 724, Bill}

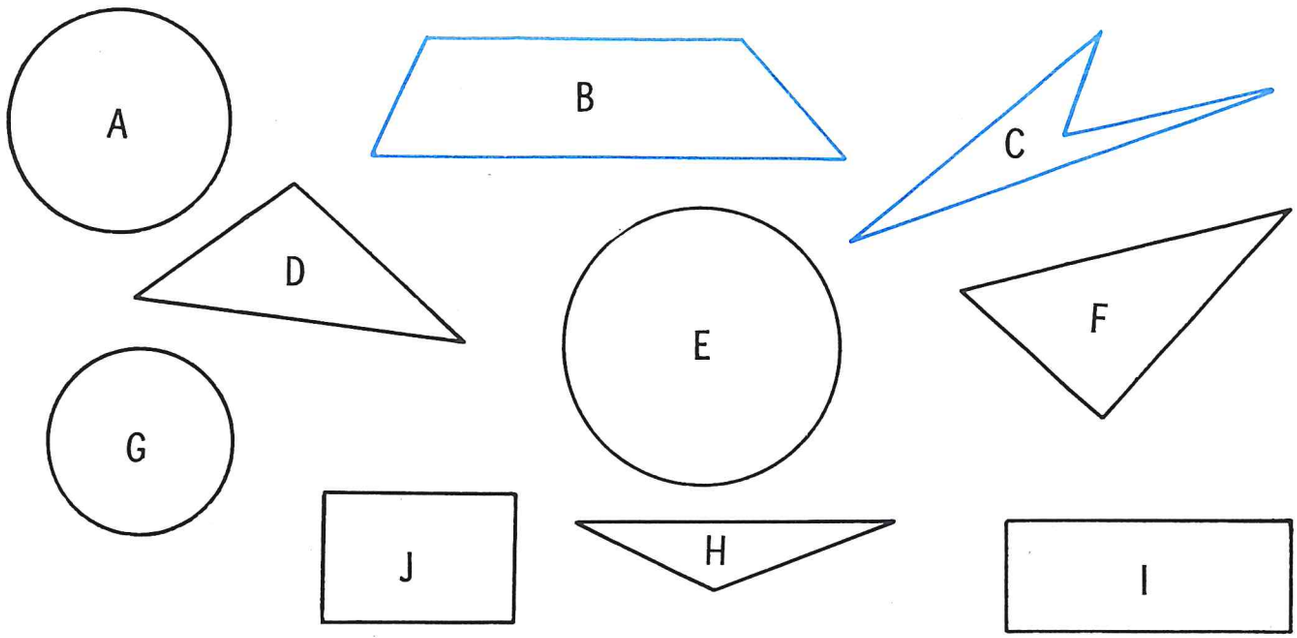
The set of numbers = _____

The set of children = _____

{Mary, Dick, Susan, Jane, Bill, Alex, Tom}

The set of girls = _____

The set of boys = _____



The set of circles = _____

The set of quadrilaterals = _____

The set of triangles = _____

The Party

John and Mary each brought two apples. Susan came with a cake. Joe brought some ice cream. Bill had a box of six oranges. Dick brought half of a cake. Jack brought four bananas. Jane brought seven apples.

The set of children with apples = _____

The set of children with oranges = _____

The set of children with fruit = _____

The set of children with cake = _____

The set of children with ice cream = _____

{ 1, John, Mary, Dick, Sue, 3, 4, Tom, 6 }

The set of boys = _____

The set of girls = _____

The set of numbers = _____

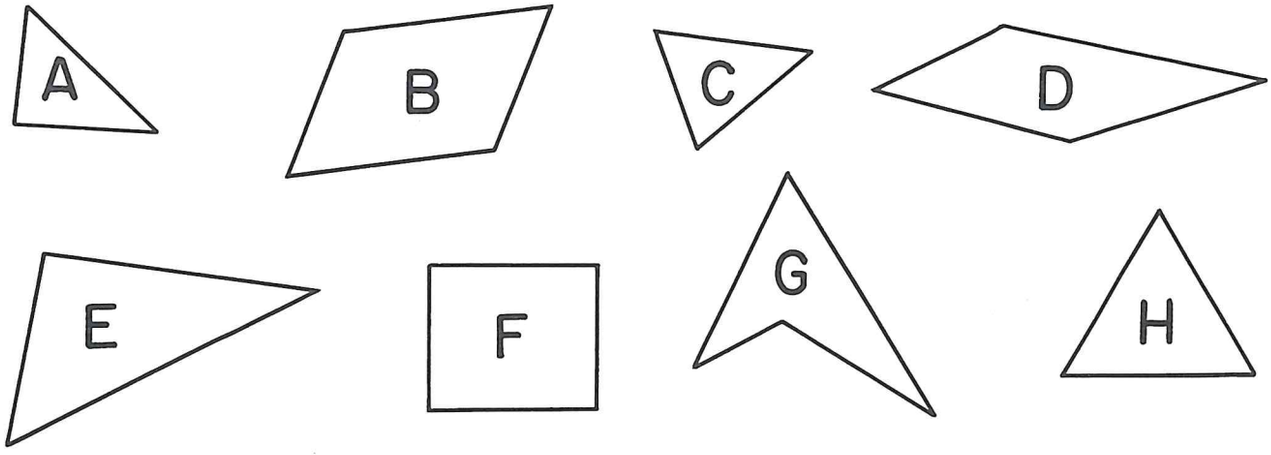
When John and Mary raced, John won. When Tom and Bill raced, Tom won. When Susan and Sally raced, Sally won.

The set of boys = _____

The set of girls = _____

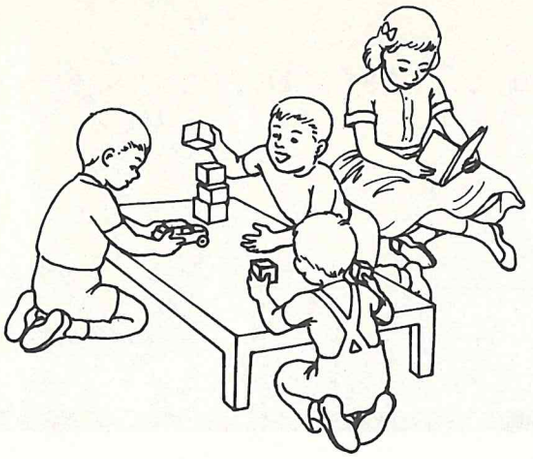
The set of winners = _____

The set of losers = _____



The set of triangles = _____

The set of quadrilaterals = _____



Mary is reading a book. Tom is taking a nap, and Susan is also taking a nap. Bill and Joe are playing with Dick. Jane is reading to her mother.

The set of boys = _____

The set of girls = _____

The set of children reading = _____

The set of children playing = _____

The set of children taking naps = _____

{0, 12, Molly, Jane, 15, 16, Bill, 20, Susan}

The set of numbers = _____

The set of girls = _____

The set of boys = _____

The set of numbers less than three is

{ 0, 1, 2 }

The set of numbers less than four is

_____

The set of numbers less than two is

_____

The set of numbers greater than one and less than five is { 2, 3, 4 }

The set of numbers greater than zero and less than three is _____

The set of numbers greater than five and less than ten is _____

The set of numbers greater than 7 and

less than 12 is _____

The set of numbers greater that 18 and

less than 25 is _____

The set of numbers greater than 48 and

less than 53 is _____

The set of numbers greater than 100 and

less than 104 is _____

The set of numbers greater than 420 and

less than 424 is _____

The set of numbers greater than 561 and

less than 565 is _____

The set of all y's such that $y < 3$ is the set of numbers $\{0, 1, 2\}$

The set of all y's such that $y < 2$ is the set of numbers _____

The set of all y's such that $y < 4$ is the set of numbers _____

The set of all y's such that $1 < y$ and $y < 4$ is the set _____

The set of all y's such that $0 < y$ and $y < 1 + 3$ is the set _____

The set of all y's such that $1 + 1 < y$ and $y < 3 + 3$ is the set _____

In place of "The set of all y's such that $y < 3$

is the set of numbers $\{0, 1, 2\}$ "

We write:

$$\{y : y < 3\} = \{0, 1, 2\}$$

$\{y : y < 2\} = \{\quad\}$

$\{y : y < 4\} =$

$\{y : 1 < y \text{ and } y < 4 =$

$\{y : y < 1\} =$

$\{y : y < 5\} =$

$\{y : 2 < y \text{ and } y < 6\} =$

$\{y : 3 < y \text{ and } y < 5\} =$

$\{m: 5 < m \text{ and } m < 9\} = \{6, 7, 8\}$

$\{m: 10 < m \text{ and } m < 14\} =$

$\{m: 20 < m \text{ and } m < 23\} =$

$\{m: 31 < m \text{ and } m < 33\} =$

$\{m: 49 < m \text{ and } m < 52\} =$

$\{m: 100 < m \text{ and } m < 104\} =$

$\{m: 99 < m \text{ and } m < 101\} =$

$\{m: 500 < m \text{ and } m < 504\} =$

$\{m: 698 < m \text{ and } m < 702\} =$

$\{m: 826 < m \text{ and } m < 830\} =$

In place of:

$$\{y: 3 < y \text{ and } y < 6\} = \{4, 5\}$$

We write:

$$\{y: 3 < y < 6\} = \{4, 5\}$$

$\{y: 20 < y < 23\} =$

$\{y: 31 < y < 35\} =$

$\{y: 100 < y < 104\} =$

$\{n: 201 < n < 205\} =$

$\{n: 354 < n < 357\} =$

$\{n: 496 < n < 499\} =$

$\{n: 729 < n < 732\} =$

Review

$\{1, 2, 7\} \cup \{10, 12\} =$ $\{1, 2, 7, 10, 12\}$

$\{\text{Bill, Sally}\} \cup \{\text{Joe}\} =$ _____

$\{991, 781\} \cup \{326, 432\} =$ _____

$\{2, 4, 6, 8\} - \{4, 8\} =$ _____

$\{208, 245, 278\} -$ _____ $= \{208, 278\}$

The set of all n's such that $n < 4$ is _____

$\{n: n < 3\} =$ _____

$\{n: 498 < n < 502\} =$ _____

..... < N{ } + N{ }

☐ 4 ☐ 7 ☐ 10

Put in < or =

5 + 6	< 12	11 + 7	18
8 + 9	17	10 + 3	14
7 + 7	15	8 + 8	18

10 + ____ < 14 ____ < 100 + 100

20 + ____ < 25 ____ < 200 + 200

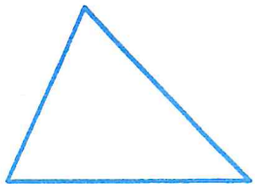
{Tod, Sancho} ⊂ .....

☐ {Tod} ☐ {Sancho, Max} ☐ {Max, Tod, Sancho}

{Sarah, Karen} ⊂ _____

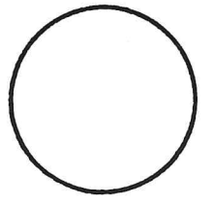
{Sam} ∪ _____ ⊂ {Sam, Bob}

Part 12 Geometry



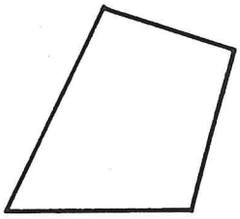
triangle

line segment

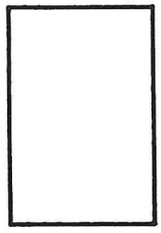


circle

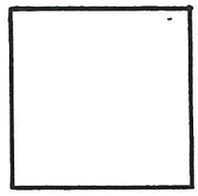
point



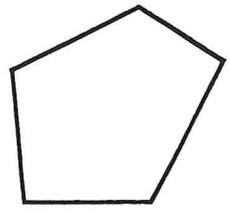
quadrilateral



rectangle



square



pentagon

A. Color inside the triangle red.

A _____ has ____ sides.

B. Color inside the quadrilateral green.

A _____ has ____ sides.

C. Color inside the pentagon yellow.

A _____ has ____ sides.

D. Color inside the rectangle orange.

A _____ has ____ sides.

E. Color inside the square brown.

A _____ has ____ sides.

F. Color inside the circle blue.

A _____ has ____ sides.

G. Squares and rectangles are special kinds of .....

☐ pentagons ☐ triangles ☐ quadrilaterals

Draw a line segment from point A to point B.

Draw the line segment determined by A and B.

Connect A and B.

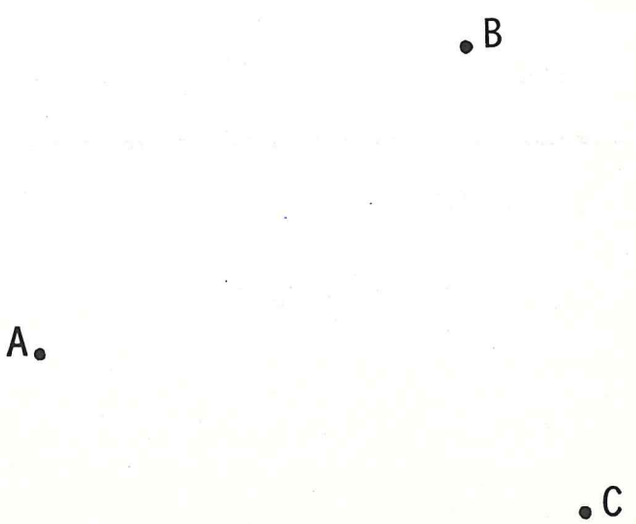
Connect points X and Y.

Connect A and B.

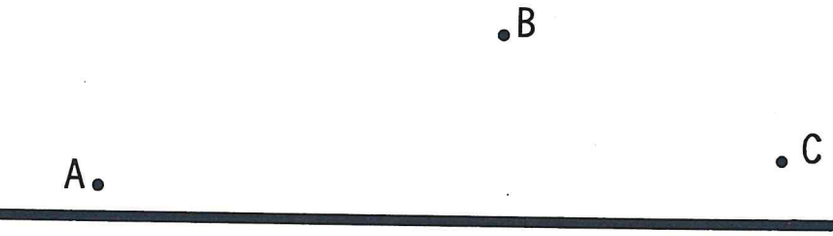
Connect B and C.

Connect A and C.

This figure with three sides is a triangle.



Draw the triangle determined by points A, B, and C.



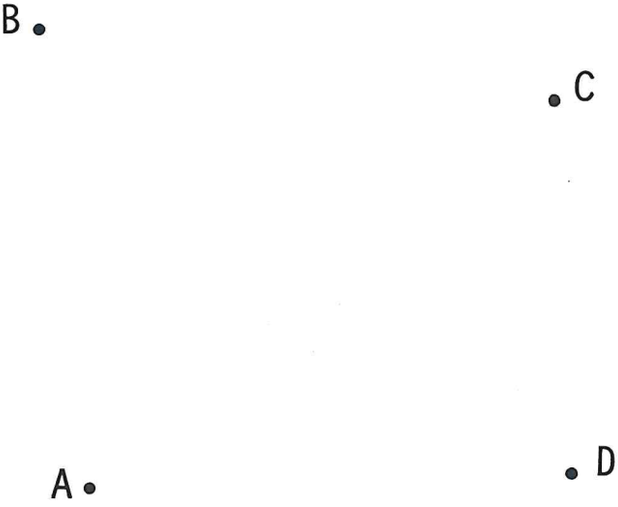
Draw the triangle determined by the three given points.

Draw segment AB.

Draw segment BC.

Draw segment CD.

Draw segment AD.



This figure with four sides is a quadrilateral.

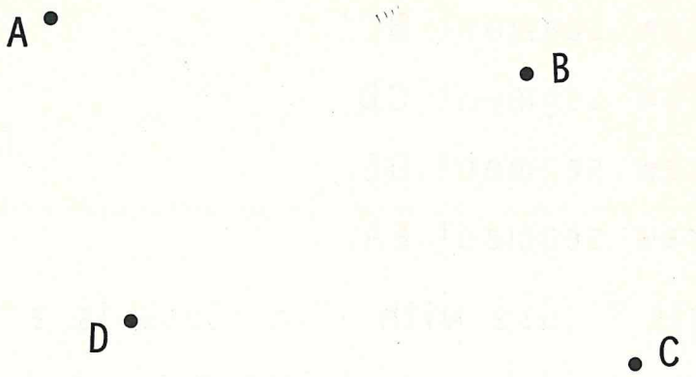
Draw the determined by points X, Y, U, and V.

Draw segment AB.

Draw segment BC.

Draw segment CD.

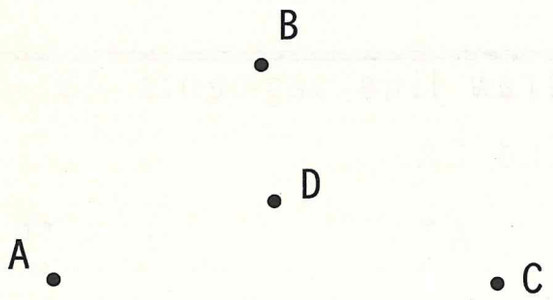
Draw segment AD.



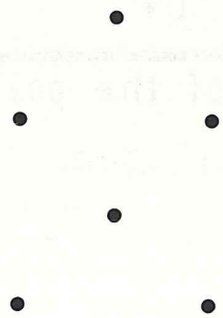
This figure with four sides is a _____.

(line, circle, square, quadrilateral)

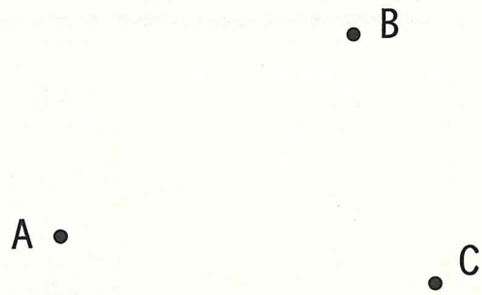
Draw the quadrilateral determined by points A, B, C, and D.



Use four of the points to draw a square.



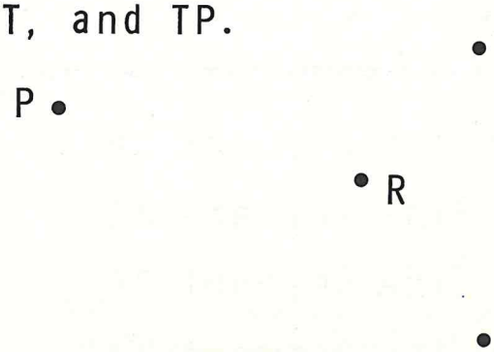
Draw line segments AB, BC, and AC.



This figure is a _____.

(line, triangle, quadrilateral)

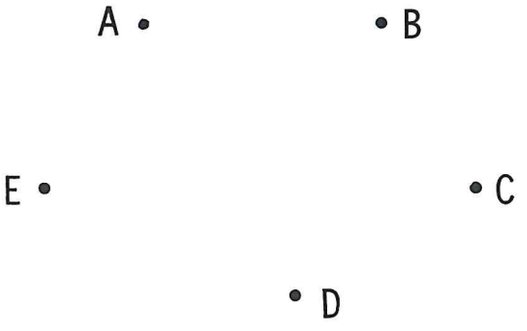
Draw line segments PS, SR, RT, and TP.



This figure is a _____.

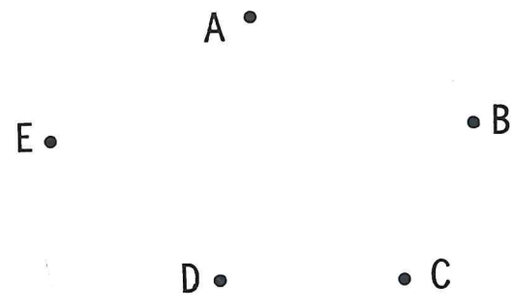
(triangle, quadrilateral, circle)

Draw segment AB.
Draw segment BC.
Draw segment CD.
Draw segment DE.
Draw segment EA.



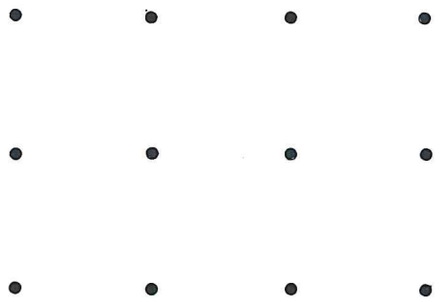
This figure with five sides is a _____
(circle, quadrilateral, pentagon, triangle)

Draw the pentagon A B C D E.

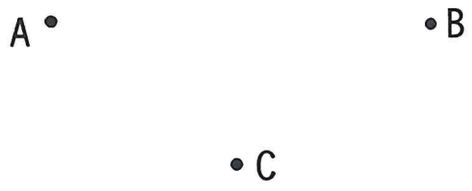


Draw the quadrilateral GHIJ.

Use five of the points to draw a pentagon.



Draw line segments AB, BC, and CA.

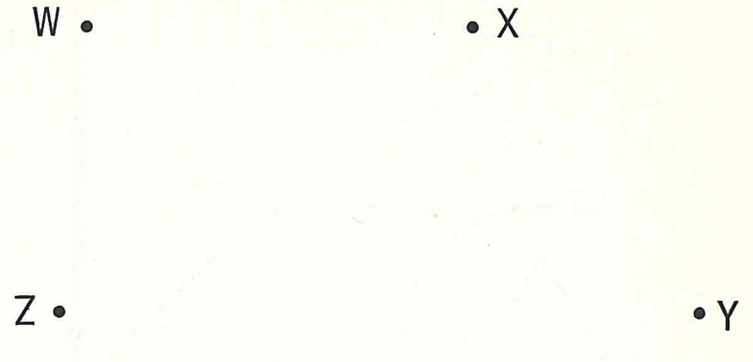


This figure is a _____.
(pentagon, triangle, quadrilateral)

Draw line segment AB.
Draw line segment BC.
Draw line segment CD.
Draw line segment DA.
Draw line segment AC.

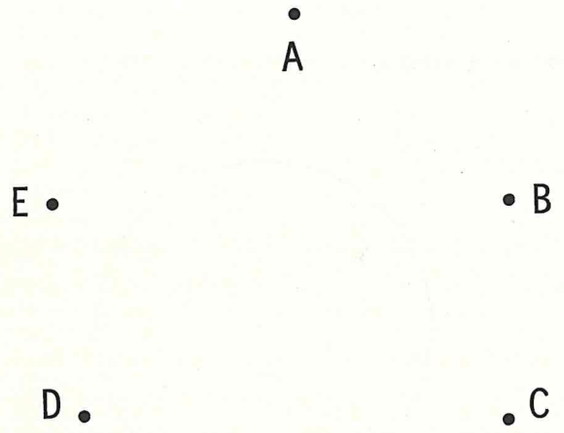
How many line segments have you drawn? _____

Draw segment WX.
Draw segment XY.
Draw segment YZ.
Draw segment ZW.
Draw segment WY.
Draw segment XZ.



You have connected points W, X, Y, Z in all ways.

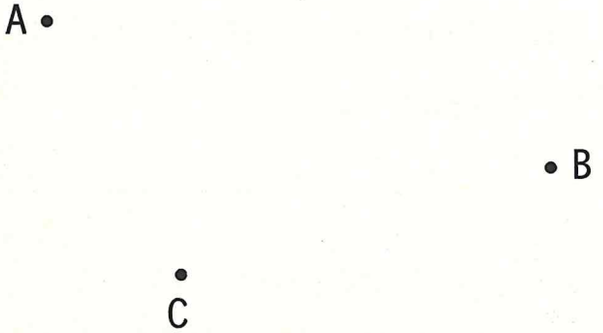
Connect points A, B, C, D, and E in all ways.



Name the ten line segments drawn.

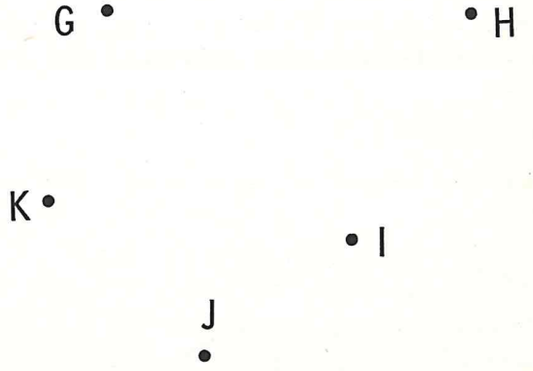
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

Connect points A, B, and C in all ways.



How many line segments did you draw? _____

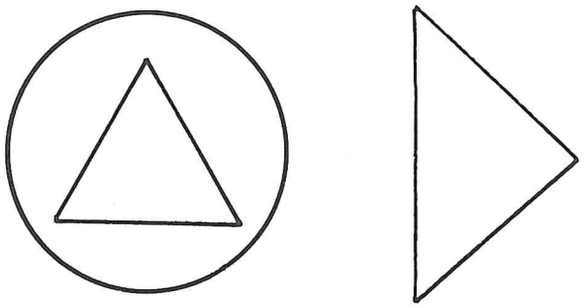
Connect points G, H, I, J, and K in all ways.



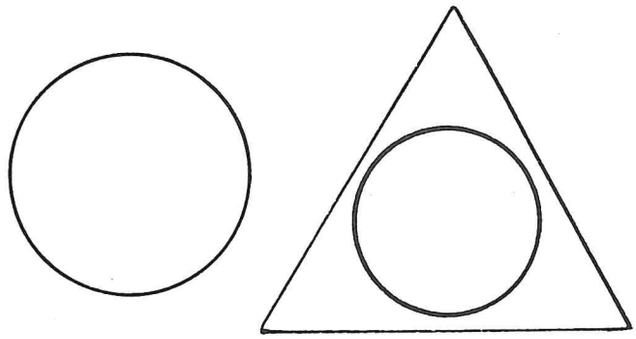
How many points did you connect? _____

How many segments did you draw? _____

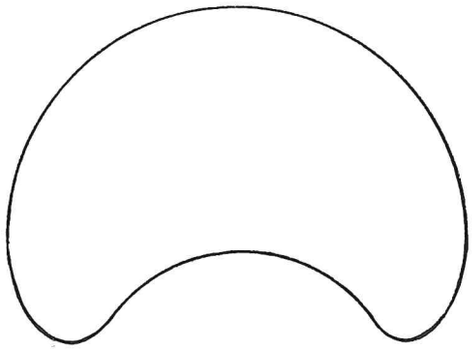
Color the triangle inside the circle.



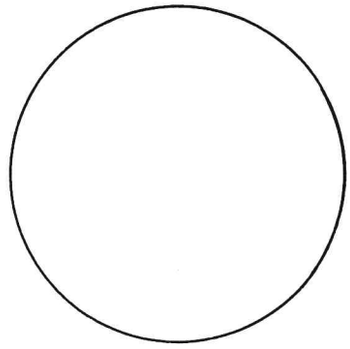
Color the circle that is outside the triangle.



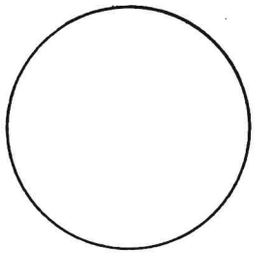
Color the inside of the figure.



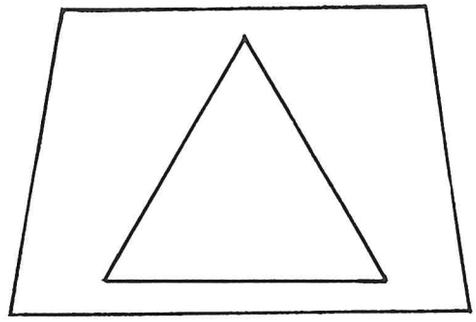
Draw a triangle inside the circle.



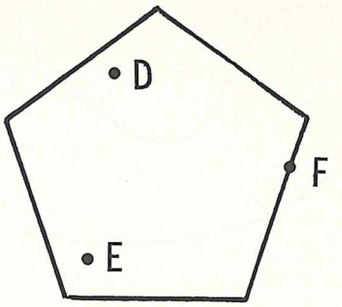
Draw a triangle outside the circle.



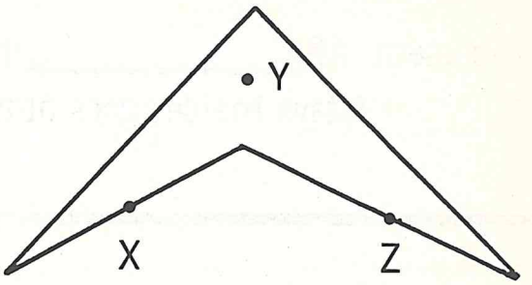
Color the inside of the quadrilateral that is outside the triangle.

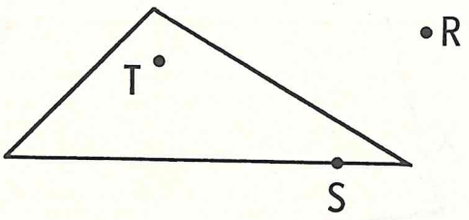


Point D is _____ the pentagon.
Point E is _____ the pentagon.
Point F is _____ the pentagon.
(inside, outside, on)

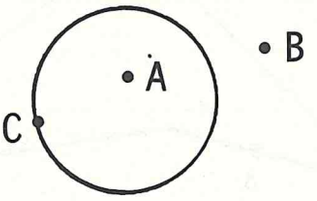


Point X is _____ the quadrilateral.
Point Y is _____ the quadrilateral.
Point Z is _____ the quadrilateral.
(inside, outside, on)

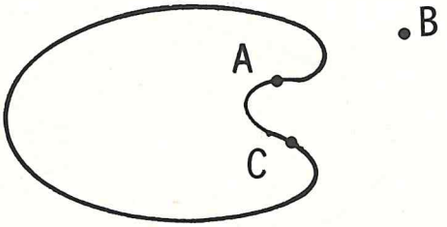




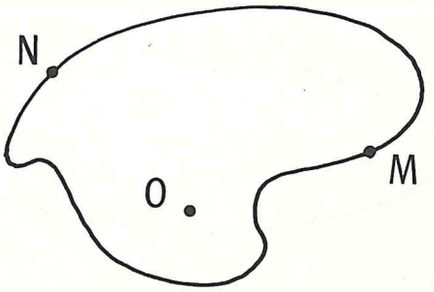
Point R is _____ the triangle.
Point S is _____ the triangle.
Point T is _____ the triangle.
(inside, outside, on)



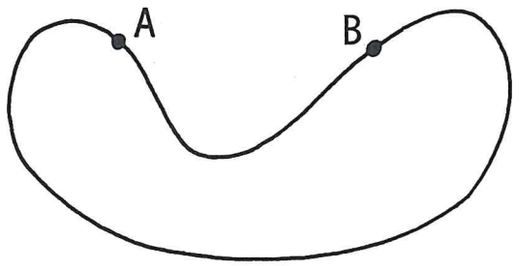
Point A is _____ the circle.
Point B is _____ the circle.
Point C is _____ the circle.
(inside, outside, on)



Point A is _____ the figure.
Point B is _____ the figure.
Point C is _____ the figure.
(inside, outside, on)



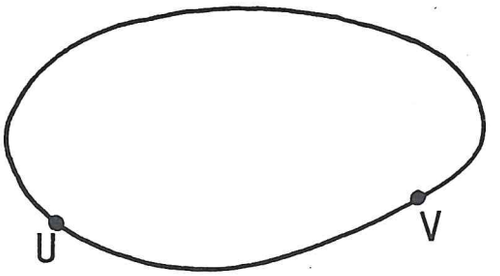
Point M is _____ the figure.
Point N is _____ the figure.
Point O is _____ the figure.
(inside, outside, on)



Draw segment AB .

Segment AB _____ the figure.

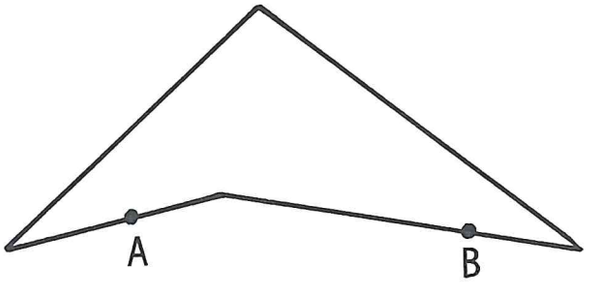
(stays inside, goes outside)



Draw segment UV .

Segment UV _____ the figure.

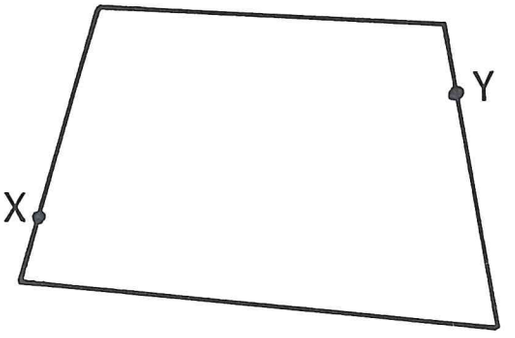
(stays inside, goes outside)



Draw segment AB .

Segment AB _____ the figure.

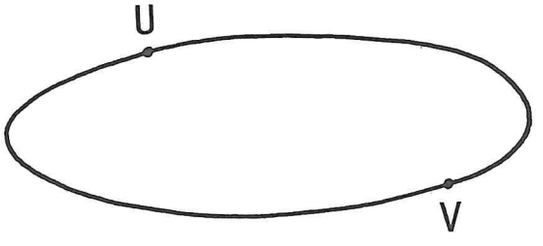
(stays inside, goes outside)



Draw segment XY .

Segment XY _____ the figure.

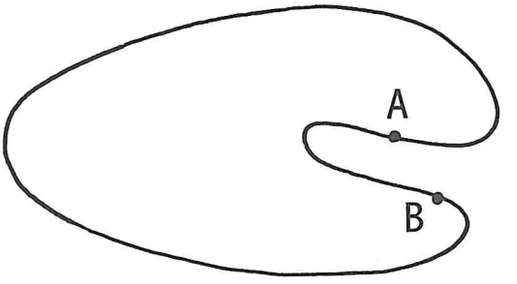
(stays inside, goes outside)



Draw segment UV .

Segment UV _____ the figure.

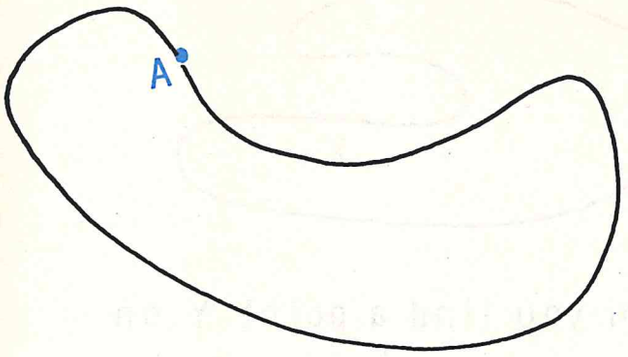
(stays inside, goes outside)



Draw segment AB .

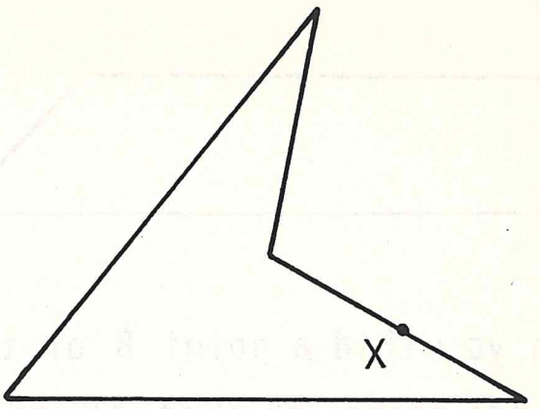
Segment AB _____ the figure.

(stays inside, goes outside)



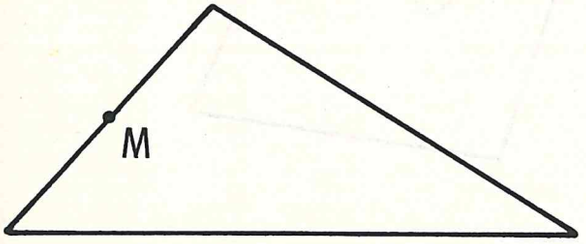
Find a point B on the figure so that segment AB goes outside the figure.

Draw segment AB .



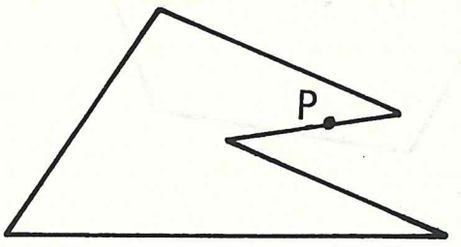
Find a point Y on the quadrilateral so that XY stays inside the figure.

Draw segment XY .



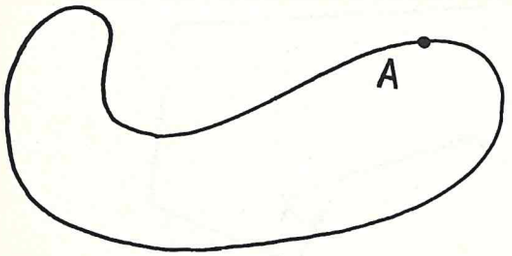
Find a point N on the triangle so that MN stays inside the figure.

Draw segment MN .



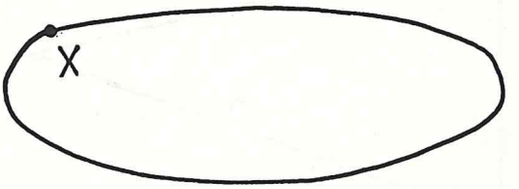
Find a point Q on the pentagon so that PQ goes outside the figure.

Draw segment PQ .



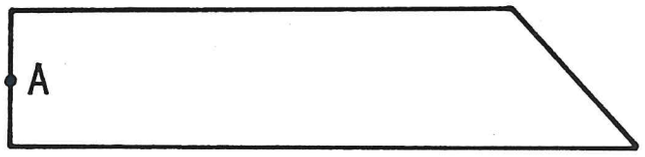
Find a point B on the figure so that AB stays inside the figure.

Draw segment AB .

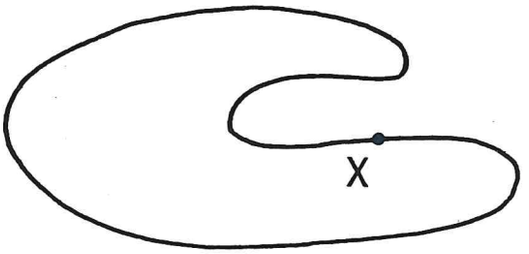


Find a point Y on the figure so that XY stays inside the figure.

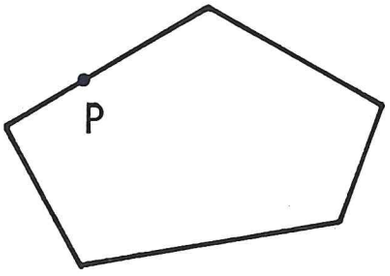
Draw XY .



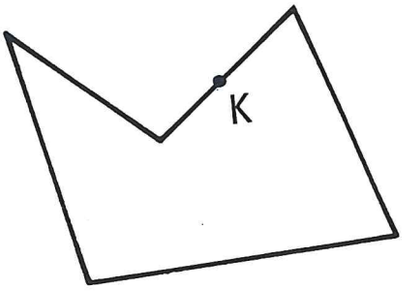
Can you find a point B on the quadrilateral so that AB goes outside the figure? _____ (Yes, No)



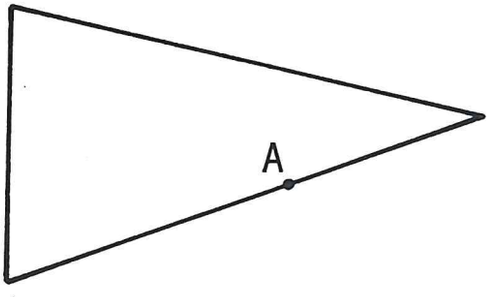
Can you find a point Y on the figure so that XY goes outside the figure? _____ (Yes, No)



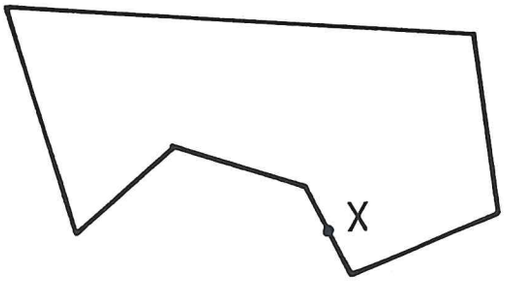
Can you find a point Q on the pentagon so that PQ goes outside the figure? _____ (Yes, No)



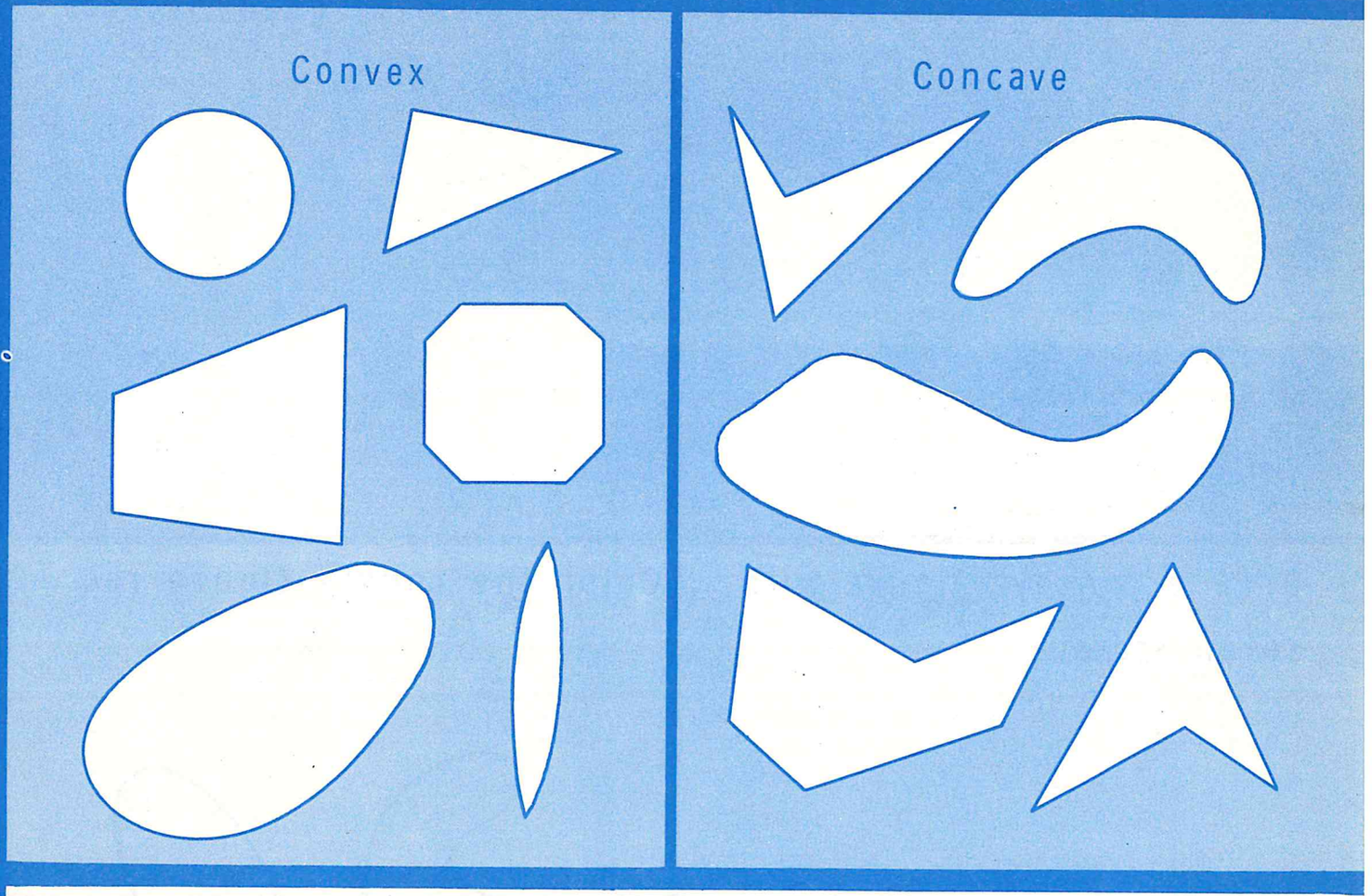
Can you find a point L on the pentagon so that KL goes outside the figure? _____ (Yes, No)



Can you find a point B on the triangle so that AB goes outside the figure? _____ (Yes, No)

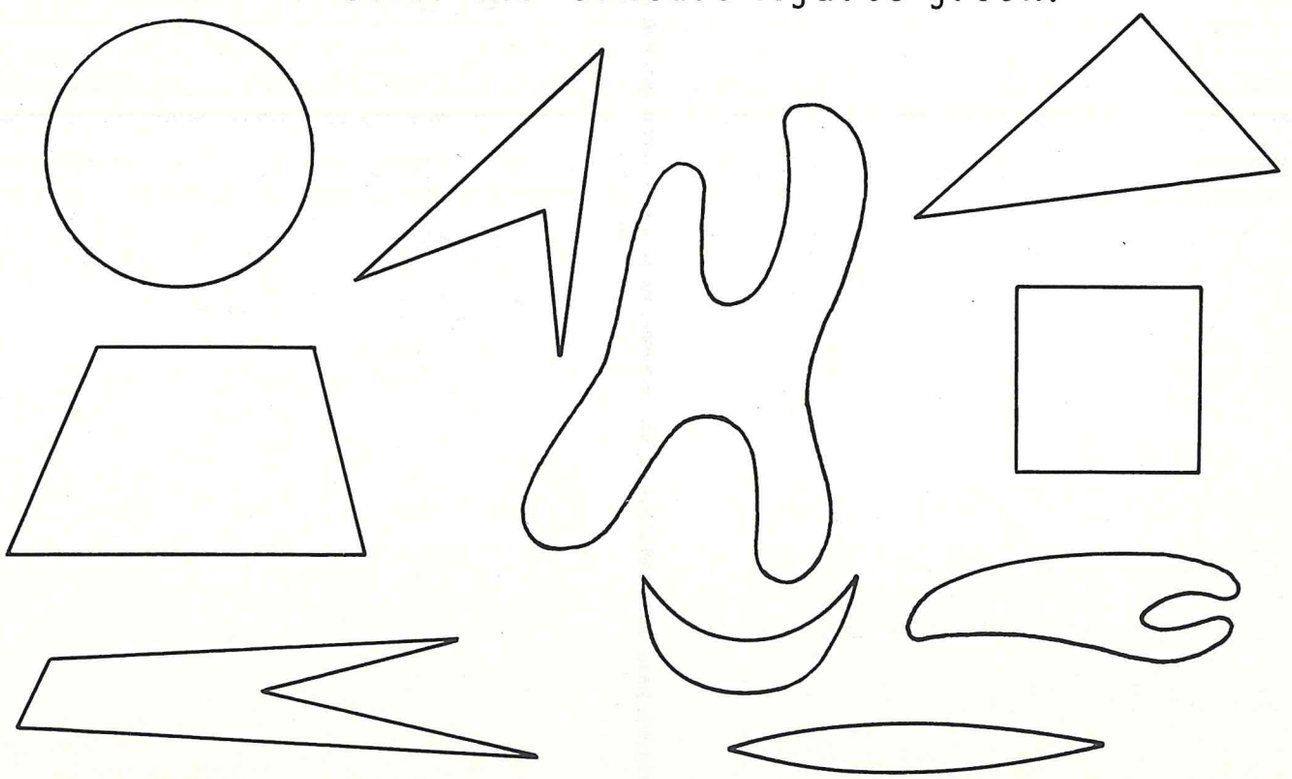


Can you find a point Y on the figure so that XY goes outside the figure? _____ (Yes, No)



Color the convex figures red.

Color the concave figures green.

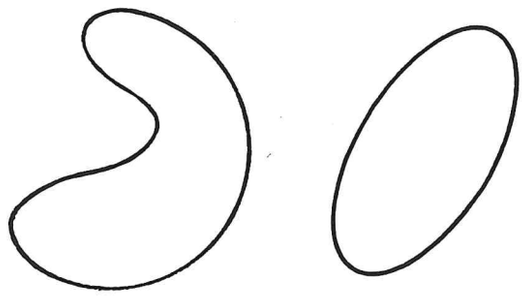


Draw a convex quadrilateral.

Draw a concave quadrilateral.

Draw a concave figure with seven sides.

Color the convex figure red.



Draw a convex figure with a concave figure inside.

Draw a concave pentagon. Then draw a convex quadrilateral inside it.

Review

$10 + ___ = 16$	$18 - 11 = ___$
$8 + ___ = 13$	$14 - 5 = ___$
$3 + ___ = 17$	$16 - 8 = ___$
$6 + ___ = 18$	$15 - 9 = ___$
$14 + ___ = 19$	$12 - 4 = ___$

Thirteen plus four is _____

$n + 20 = 100$ $n = ___$	$100 - n = 0$ $n = ___$

100 75 21	200 300 20	400 200 79	500 122 66

566 is _____ hundreds _____ tens _____ ones

978 is _____ hundreds _____ tens _____ ones

340 is _____ hundreds _____ tens _____ ones

Review

Watch for + and −

5 + 5	5 + 6	5 + 7	5 + 8	13 − 2	12 − 3	10 + 2
4 + 5	4 + 8	12 − 6	13 − 3	11 − 4	13 − 7	9 + 4
10 − 7	12 − 7	8 + 5	6 + 4	5 + 7	9 − 3	8 − 2

Find the number n

$10 + n = 13$ $n =$ ____	$11 + n = 11$ $n =$ ____	$9 + n = 13$ $n =$ ____
$6 + n = 12$ $n =$ ____	$8 + n = 13$ $n =$ ____	$3 + n = 12$ $n =$ ____
$13 - n = 3$ $n =$ ____	$12 - n = 11$ $n =$ ____	$11 - n = 11$ $n =$ ____
$9 - n = 4$ $n =$ ____	$9 + n = 11$ $n =$ ____	$6 + n = 11$ $n =$ ____
$2 + n = 12$ $n =$ ____	$1 + n = 13$ $n =$ ____	$13 - n = 9$ $n =$ ____

Review

Count by twos

2									
	24								
82									

Count by threes

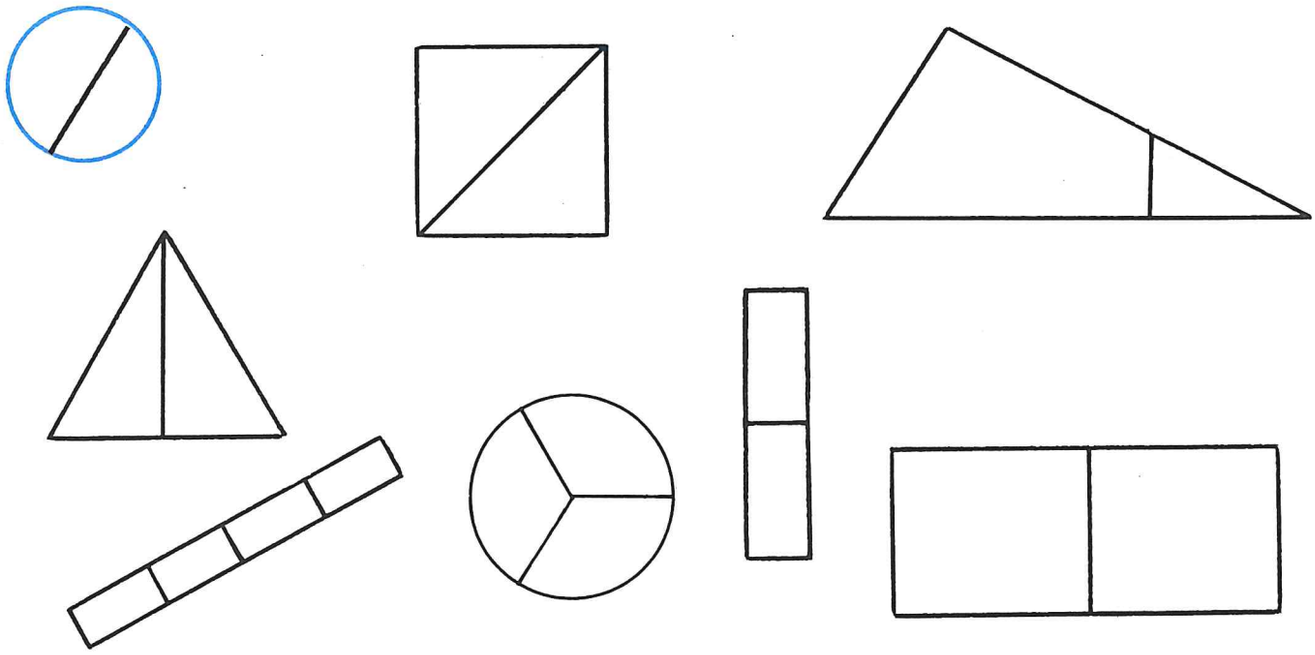
3									
	36								
63									

Count by fours

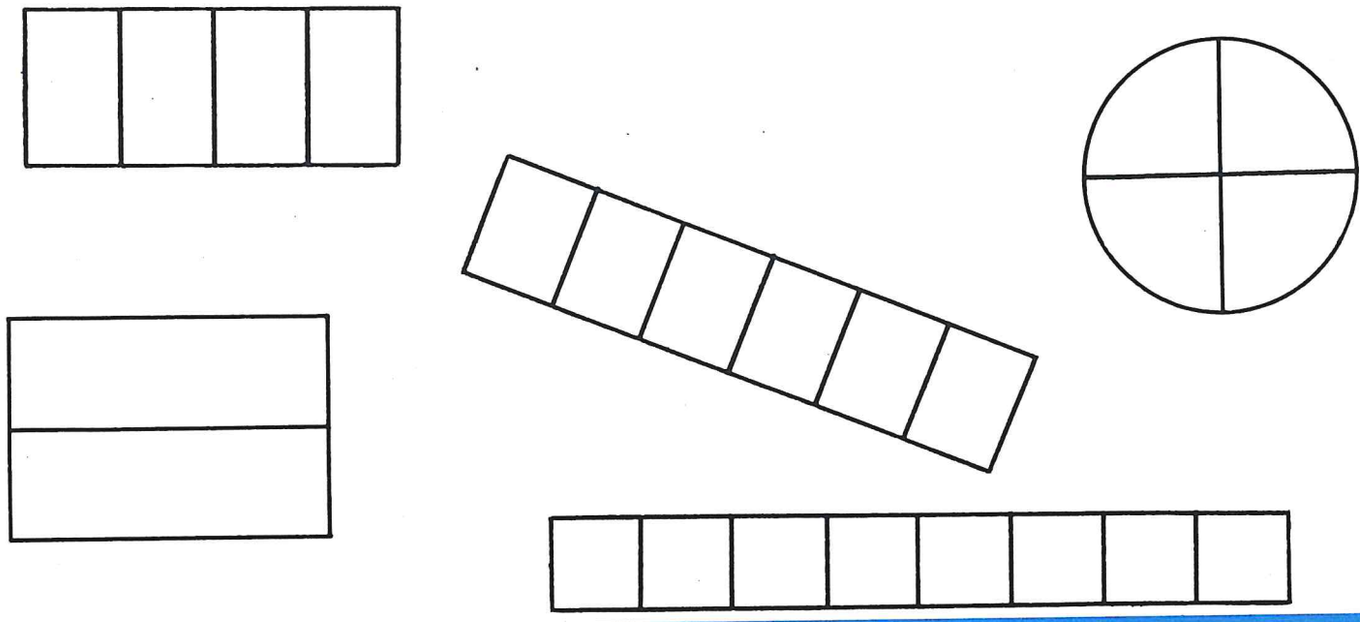
4	8								
44									
	88				104				

One half

Color each figure that is divided in half.

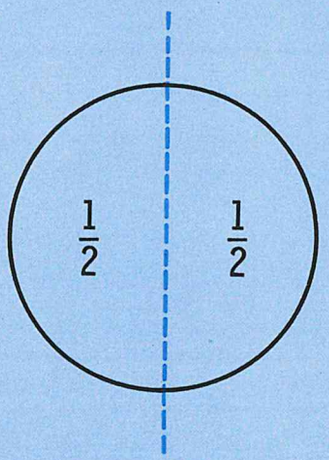


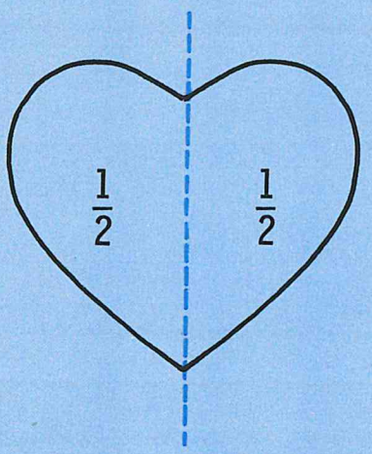
Color one half of the inside of each figure.

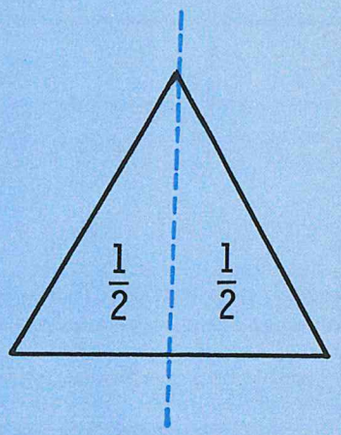


$\frac{1}{2}$ = One half

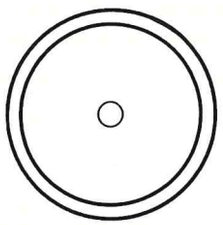
When we divide something into two equal parts, each part is one half of the whole thing.



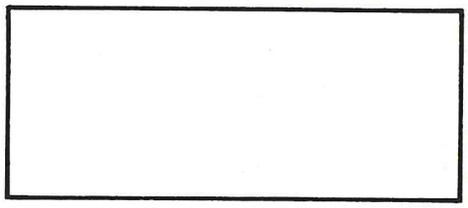




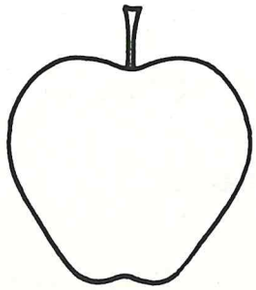
Color $\frac{1}{2}$ of the wheel.



Color $\frac{1}{2}$ of the rectangle.

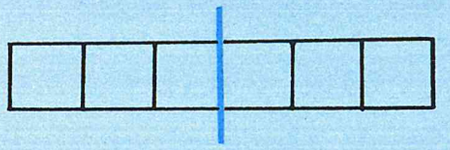


Color $\frac{1}{2}$ of the apple.

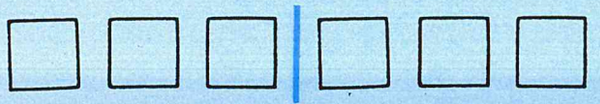


$\frac{1}{2}$ = one half

This figure is divided into two halves.

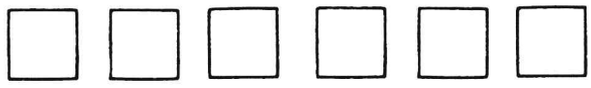


This row of blocks is divided into two equal groups.

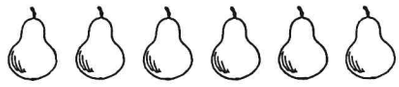


Each group is one half of the whole group.

Draw a line around one half of the blocks.

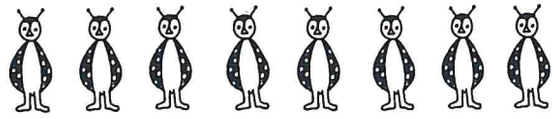


Draw a line around one half of the group of pears.



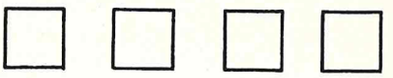
Draw a line around one half of the cars.

Draw a line around $\frac{1}{2}$ of the bugs.



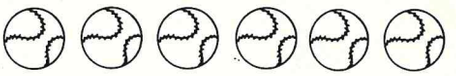
$\frac{1}{2}$ of 8 = 4

Color one half of the blocks.



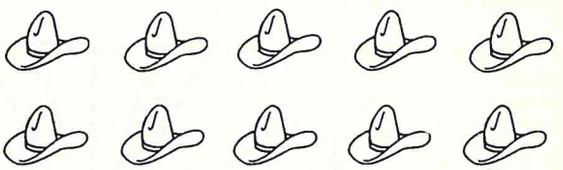
$\frac{1}{2}$ of 4 = ____

Color $\frac{1}{2}$ of the balls.



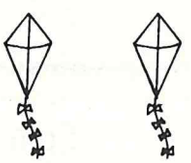
$\frac{1}{2}$ of 6 = ____

Color $\frac{1}{2}$ of the hats.



$\frac{1}{2}$ of 10 = ____

Color $\frac{1}{2}$ of the kites.



$\frac{1}{2}$ of 2 = ____

$\frac{1}{2}$ of 10 is ____

$\frac{1}{2}$ of 6 is ____

$\frac{1}{2}$ of 8 is ____

$\frac{1}{2}$ of 2 is ____

4 is one half of 8

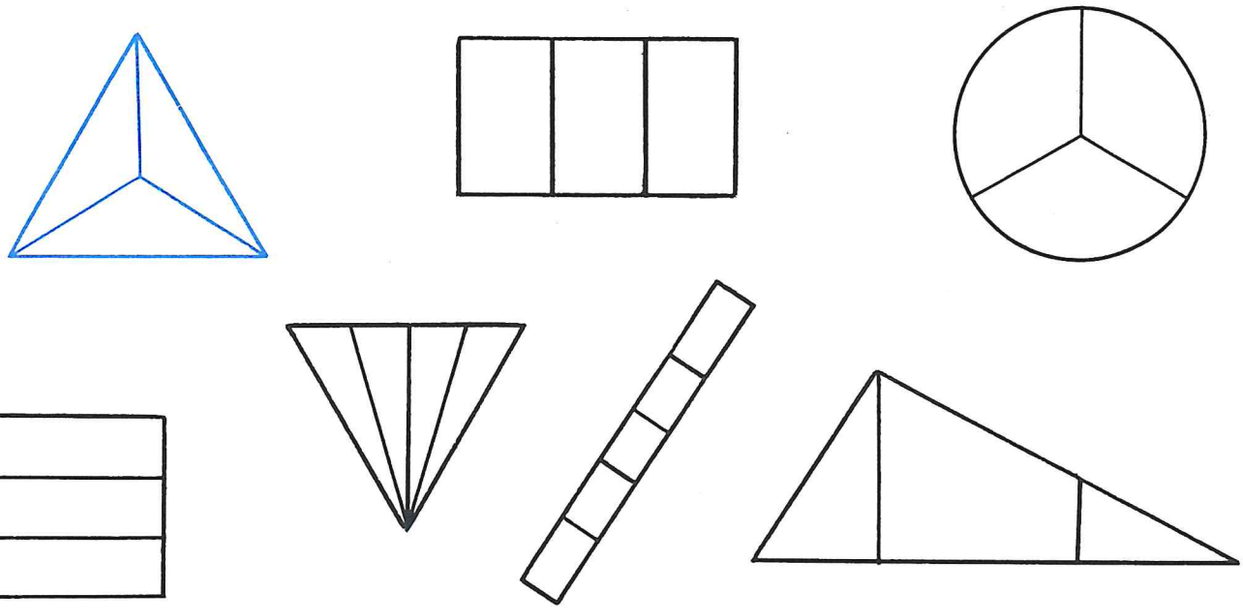
3 is one half of ____

5 is one half of ____

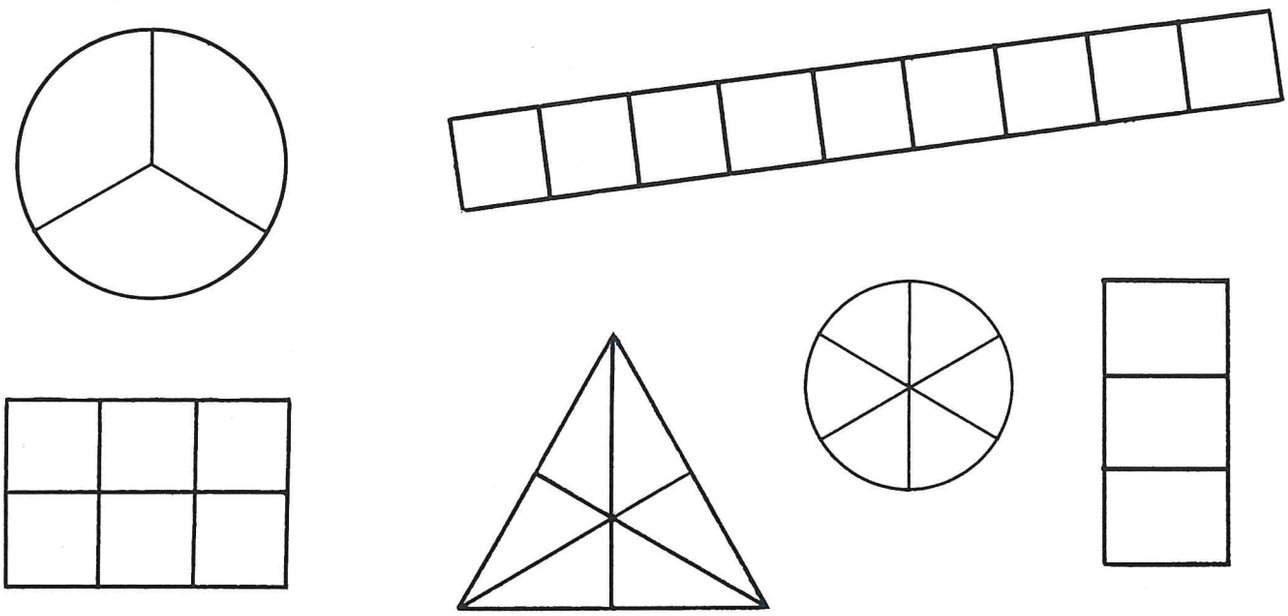
2 is one half of ____

One third

Color each figure that is divided in thirds.

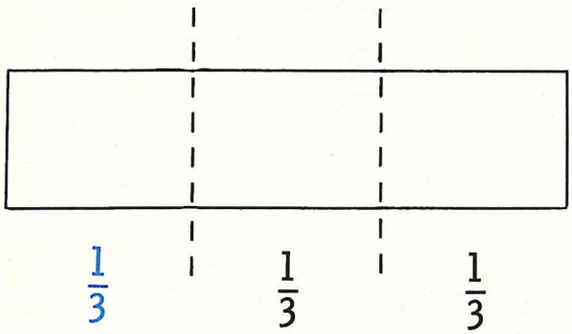


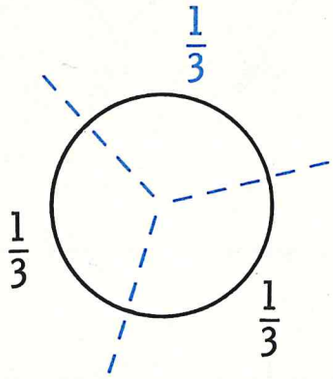
Color one third of the inside of each figure.

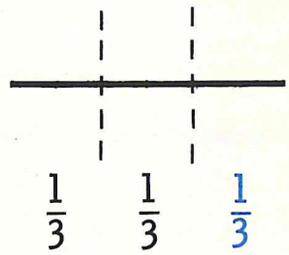


$\frac{1}{3}$ = One third

When we divide something into three equal parts, each part is one third of the whole thing.

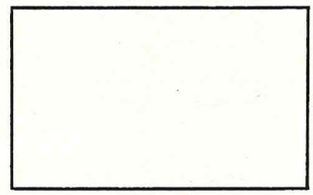






Divide each of these things into three equal parts.

Color $\frac{1}{3}$ of the rectangle.

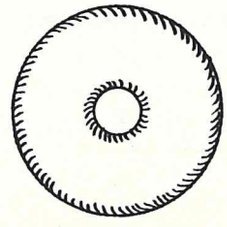


rectangle

Color $\frac{1}{3}$ of the board.

board

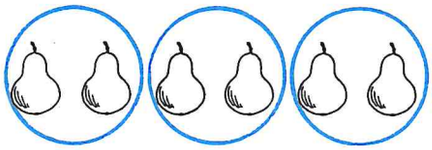
Color $\frac{1}{3}$ of the doughnut.

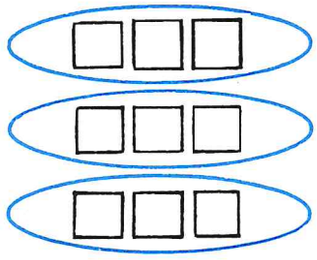


doughnut

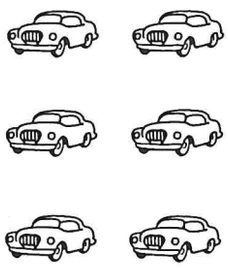
$\frac{1}{3}$ = One third

Each group is one third of the whole group.

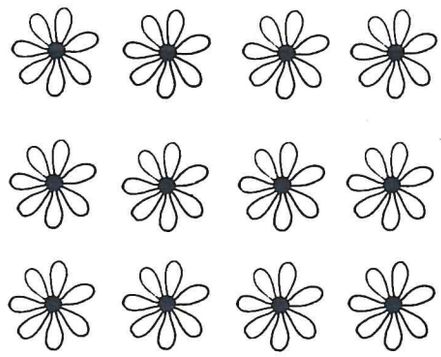




Divide each of these groups of things into three equal groups.



Color $\frac{1}{3}$ of the cars.



Color $\frac{1}{3}$ of the flowers.

Color $\frac{1}{3}$ of the circles.

Color $\frac{1}{3}$ of the triangles.

$\frac{1}{3}$ of 9 = ____

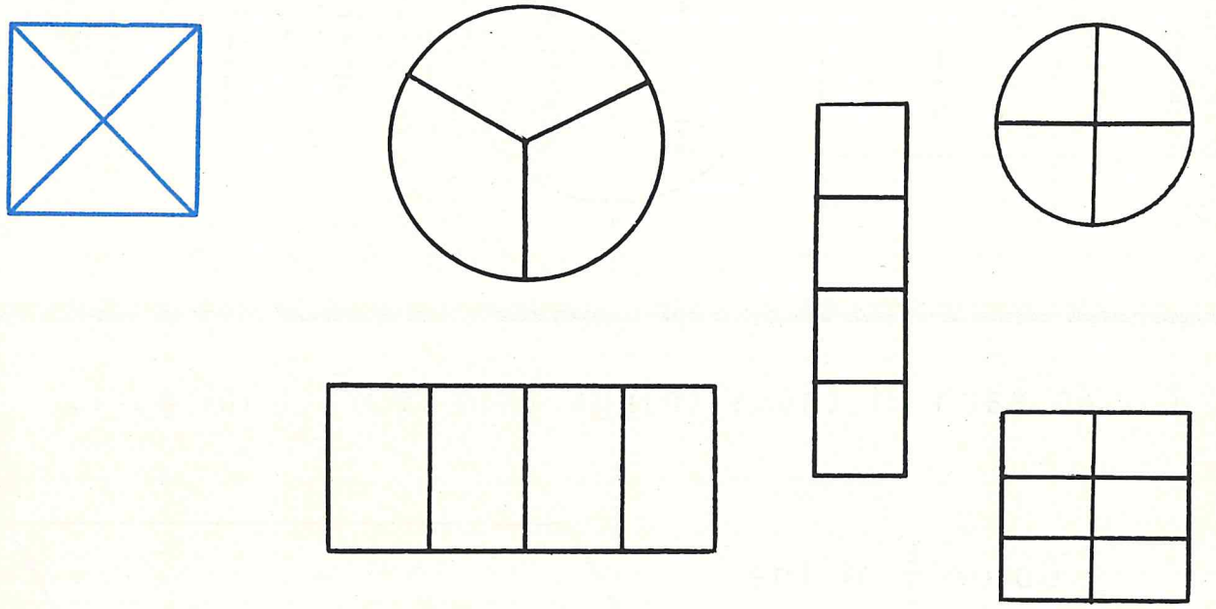
$\frac{1}{3}$ of 3 = ____

$\frac{1}{3}$ of 12 = ____

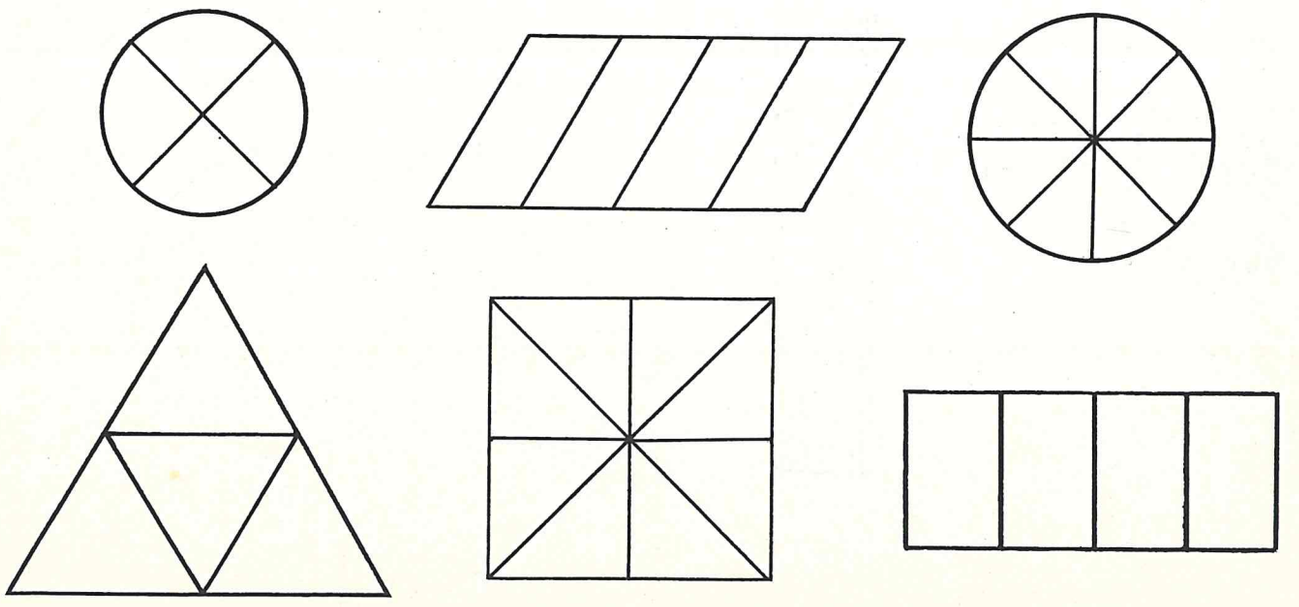
$\frac{1}{3}$ of 6 = ____

One fourth

Color each figure that is divided in fourths.

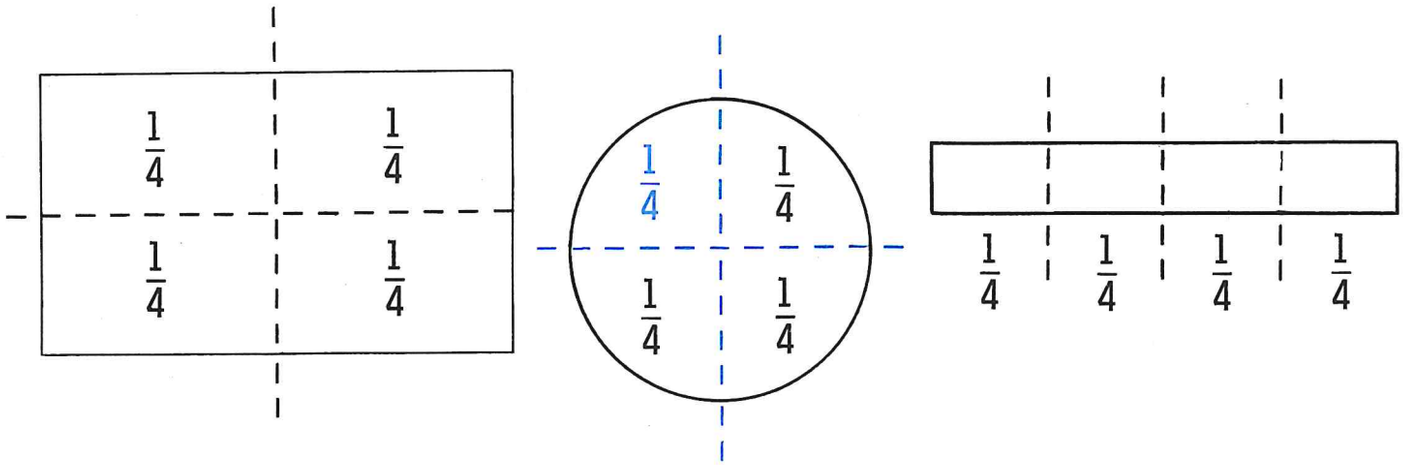


Color one fourth of each figure.



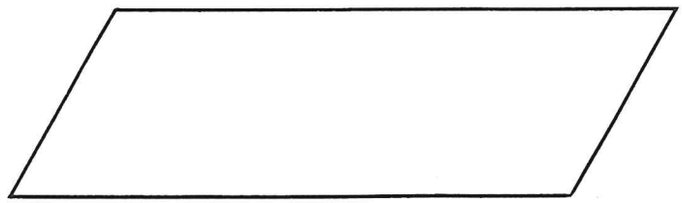
$\frac{1}{4}$ = One fourth

When we divide something into four equal parts, each part is one fourth of the whole thing.



Divide each of these things into four equal parts.

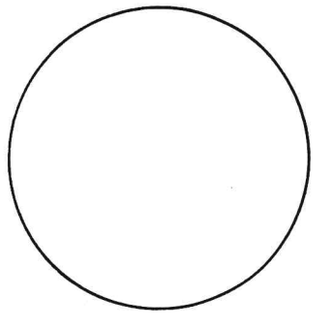
Color $\frac{1}{4}$ of the quadrilateral.



quadrilateral

Color $\frac{1}{4}$ of the board

board

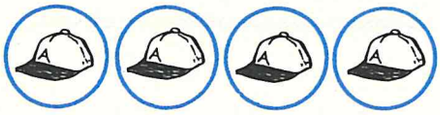


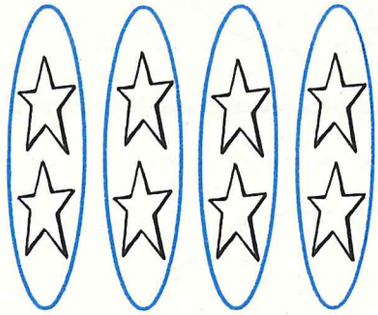
ball

Color $\frac{1}{4}$ of the ball.

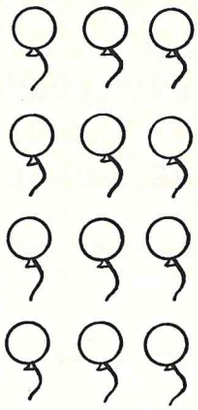
$\frac{1}{4}$ = One fourth

Each group is one fourth of the whole group.





Divide each of these groups of things into four equal groups.



Color $\frac{1}{4}$ of the balloons.

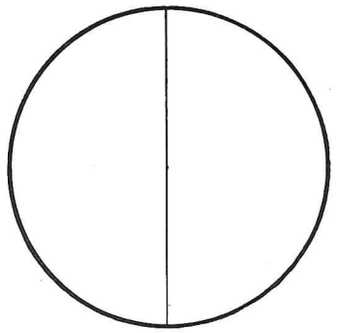
Color $\frac{1}{4}$ of the drums.

$\frac{1}{4}$ of 4 = ___

$\frac{1}{4}$ of 16 = ___

$\frac{1}{4}$ of 8 = ___

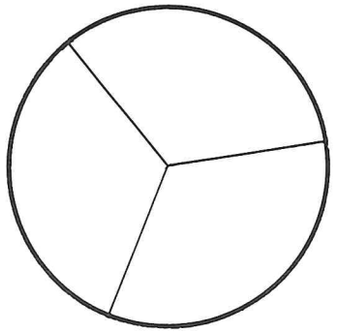
$\frac{1}{4}$ of 12 = ___



Color $\frac{1}{2}$ of the ball red.

Color $\frac{1}{2}$ of the ball blue.

$\frac{1}{2} + \frac{1}{2} =$ _____

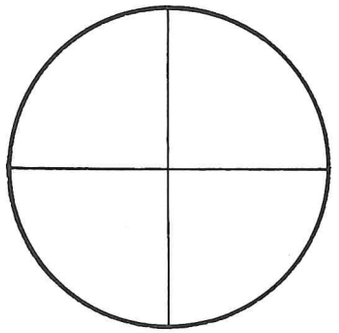


Color $\frac{1}{3}$ of the ball green.

Color $\frac{1}{3}$ of the ball orange.

Color $\frac{1}{3}$ of the ball brown.

$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} =$ _____



Color $\frac{1}{4}$ of the ball yellow.

Color $\frac{1}{4}$ of the ball blue.

Color $\frac{1}{4}$ of the ball red.

Color $\frac{1}{4}$ of the ball green.

$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} =$ _____

How many fourths make 1 ? _____

How many halves make 1 ? _____

How many thirds make 1 ? _____

Review

200	300	400	100
64	201	160	516
31	54	25	32

585 is _____ hundreds _____ tens _____ ones

602 is _____ hundreds _____ tens _____ ones

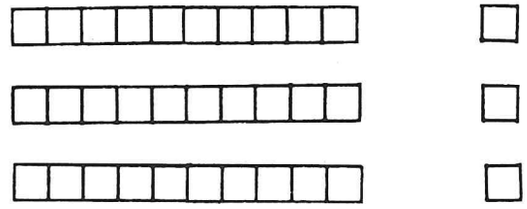
_____ + 7 = 16	15 − _____ = 10
_____ + 9 = 14	12 − _____ = 3
_____ + 11 = 17	16 − _____ = 8
_____ + 3 = 15	13 − _____ = 3
_____ + 8 = 19	18 − _____ = 9

n + 30 = 100	100 − n = 20
n = _____	n = _____

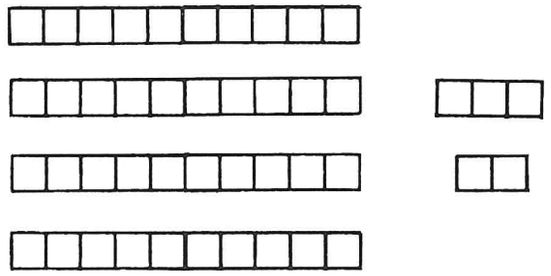
Find the differences or sums.

6	18	15	8	14	7
+ 7	− 8	− 1	+ 5	− 2	+ 9
12	14	4	6	19	18
− 2	− 3	+ 12	+ 9	− 12	− 11

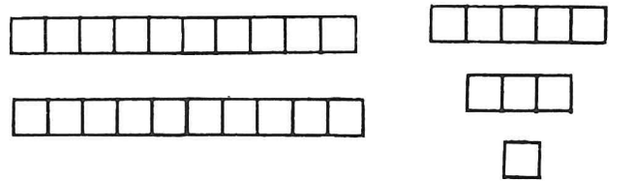
Part 14 Regrouping in Addition



3 tens 3 ones = 33



____ tens ____ ones = ____



____ tens ____ ones = ____

10 + 10 + 10 + 10 = ____ ____ tens = ____	10 + 10 + 10 + 7 = ____ ____ tens and ____ ones = ____
50 + 2 = ____ ____ tens and ____ ones = ____	60 + 7 = ____ ____ tens and ____ ones = ____
90 + 0 = ____ ____ tens and ____ ones = ____	70 + 3 = ____ ____ tens and ____ ones = ____
80 + 5 = ____ ____ tens and ____ ones = ____	50 + 9 = ____ ____ tens and ____ ones = ____

24 is 2 tens and 4 ones

59 is ____ tens and ____ ones

71 is ____ tens and ____ ones

86 is ____ tens and ____ ones

4 tens and 2 ones are ____

6 tens and 5 ones are ____

9 tens and 7 ones are ____

3 tens and 9 ones are ____

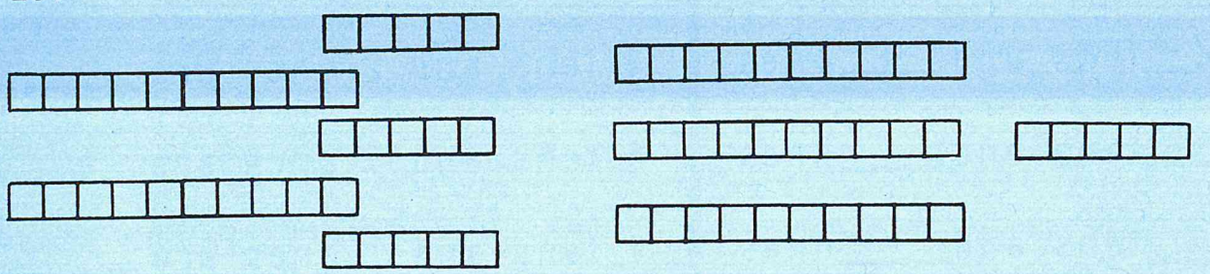
40 + 11	50 + 13	30 + 17	20 + 22	30 + 47	80 + 15
10 + 37	20 + 66	50 + 35	60 + 20	70 + 27	30 + 60

Find the sums.

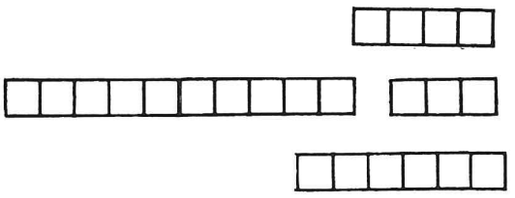
6 7 2	8 1 5	4 6 3	3 5 5	3 3 9	6 7 3	12 4 3	5 11 3
8 8 2	4 10 3	5 5 6	4 6 7	3 7 8	5 8 2	13 5 1	17 10 2

Jim has a nickel, Tom has 4 cents, and Bill has 3 cents. How many cents do they have together? ____

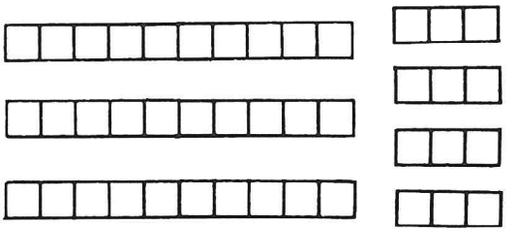
Dick has 7 toy cars. John has 8 cars. How many cars do they have in all? ____



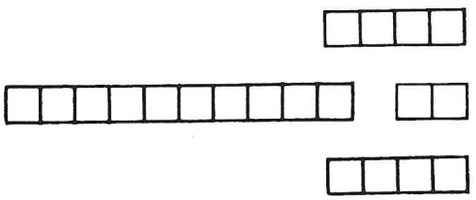
2 tens and 15 ones = 3 tens and 5 ones = 35



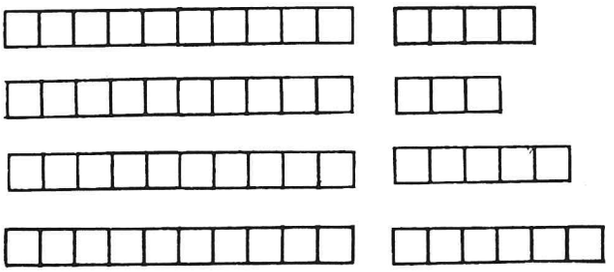
1 ten and 13 ones = 2 tens and 3 ones = ____



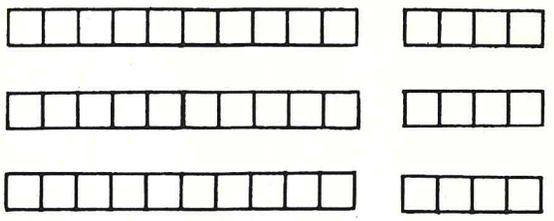
____ tens and ____ ones = ____ tens and ____ ones = ____



____ ten and ____ ones = ____ tens and ____ ones = ____



____ tens and ____ ones = ____ tens and ____ ones = ____



____tens and ____ones = ____ tens and ____ ones = ____

Fill in the blanks.

3 tens and 11 ones = 4 tens and 1 one = ____

2 tens and 19 ones = ____ tens and ____ ones = ____

6 tens and 13 ones = ____ tens and ____ ones = ____

1 ten and 18 ones = ____ tens and ____ ones = ____

4 tens and 16 ones = ____ tens and ____ ones = ____

7 tens and 10 ones = ____ tens and ____ ones = ____

3 tens and 24 ones = ____ tens and ____ ones = ____

1 ten and 28 ones = ____ tens and ____ ones = ____

7 tens and 29 ones = ____ tens and ____ ones = ____

6 tens and 23 ones = ____ tens and ____ ones = ____

5 tens and 41 ones = ____ tens and ____ ones = ____

2 tens and 46 ones = ____ tens and ____ ones = ____

2 tens and 58 ones = ____ tens and ____ ones = ____

8 tens and 12 ones = ____ tens and ____ ones = ____

6 tens and 27 ones = ____ tens and ____ ones = ____

4 tens and 20 ones = ____ tens and ____ ones = ____

3 tens and 8 ones
+ 2 tens and 7 ones

___ tens and ___ ones = ____ tens and ____ ones = ____

---

6 tens and 6 ones
+ 2 tens and 7 ones

___ tens and ___ ones = ____ tens and ____ ones = ____

---

5 tens and 3 ones
+ 3 tens and 7 ones

___ tens and ___ ones = ____ tens and ____ ones = ____

---

0 tens and 9 ones
+ 6 tens and 7 ones

___ tens and ___ ones = ____ tens and ____ ones = ____

---

0 tens and 4 ones
+ 4 tens and 8 ones

___ tens and ___ ones = ____ tens and ____ ones = ____

---

6 tens and 3 ones
+ 1 ten and 9 ones

___ tens and ___ ones = ____ tens and ____ ones = ____

24 = 2 tens and 4 ones
+ 18 = 1 ten and 8 ones

____ tens and ____ ones = _____

---

28 = 2 tens and 8 ones
+ 19 = 1 ten and 9 ones

____ tens and ____ ones = _____

---

37 = ____ tens and ____ ones
+ 36 = ____ tens and ____ ones

____ tens and ____ ones = _____

---

49 = ____ tens and ____ ones
+ 35 = ____ tens and ____ ones

____ tens and ____ ones = _____

---

55 = ____ tens and ____ ones
+ 27 = ____ tens and ____ ones

____ tens and ____ ones = _____

---

45 = ____ tens and ____ ones
+ 19 = ____ ten and ____ ones

____ tens and ____ ones = _____

---

46 = ____ tens and ____ ones
+ 49 = ____ tens and ____ ones

____ tens and ____ ones = _____

24 = ____ tens and ____ ones

+ 18 = ____ tens and ____ ones

= ____ tens and ____ ones = _____

---

27 = ____ tens and ____ ones

+ 39 = ____ tens and ____ ones

= ____ tens and ____ ones = _____

---

46 = ____ tens and ____ ones

+ 25 = ____ tens and ____ ones

= ____ tens and ____ ones = _____

---

54 = ____ tens and ____ ones

+ 29 = ____ tens and ____ ones

= ____ tens and ____ ones = _____

---

38 = ____ tens and ____ ones

+ 48 = ____ tens and ____ ones

____ tens and ____ ones = _____

---

25 = ____ tens and ____ ones

+ 65 = ____ tens and ____ ones

= ____ tens and ____ ones = _____

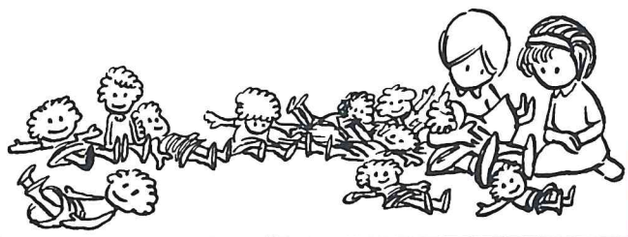
1 18 + 18 36	1 27 + 34 _1	1 18 + 49 __	1 79 + 14	1 35 + 48	1 78 + 16
1 36 + 47	1 26 + 69	1 15 + 48	1 37 + 18	1 23 + 67	1 19 + 19
36 + 15	28 + 29	19 + 18	57 + 16	66 + 25	58 + 46
25 + 45	16 + 74	72 + 18	65 + 26	63 + 19	67 + 18
45 + 18	19 + 39	14 + 36	18 + 29	36 + 36	45 + 45

Sue has 14 books and Rosita has 17 books. How many do they have together? _____

Max has 27 cents and Tod has 19 cents. How much money do they have together? _____

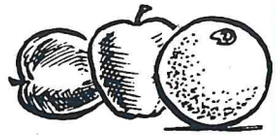
25 +15	33 +29	18 +18	49 +16	68 +25	46 +46
35 +24	32 +26	83 +16	91 + 8	75 +21	63 +33
26 +37	29 +12	32 +47	25 +31	29 +68	30 +59
24 +19	37 +16	11 +45	16 +19	17 +17	39 +39

Jane has 12 dolls and Mary has 19 dolls. How many do they have together? _____



Tom has 18 cents and Bill has 17 cents. How much money do they have together? _____

Sue has 25 oranges and 18 apples. How many pieces of fruit does she have? _____



35 +16	44 +38	29 +33	27 +63	55 +39	37 +22
44 +36	23 +69	75 +15	39 +19	14 +17	87 + 9
66 +25	79 + 1	19 + 8	34 +54	68 +28	55 +35
26 +19	39 +18	47 +19	56 +17	68 +19	18 +49

Tom has 34 cents and John has 49 cents. How much money do they have together? _____

Mary has one dozen bananas and nineteen apples. How many pieces of fruit does she have? _____

Bill has one dozen eggs in one basket and fifteen eggs in another. How many eggs does he have? _____

125 is 1 hundred 2 tens 5 ones

210 is _____ hundreds _____ ten _____ ones

605 is _____ hundreds _____ tens _____ ones

750 is _____ hundreds _____ tens _____ ones

260 is _____ hundreds _____ tens _____ ones

870 is _____ hundreds _____ tens _____ ones

350 + 250	330 + 270	180 + 280	270 + 160	230 + 190	340 + 380

340 + 560	290 + 360	280 + 180	530 + 80	490 + 390	250 + 450

282 + 123	196 + 333	184 + 192	152 + 152	362 + 290	491 + 75

Ben has 140 marbles and Don has 180. How many do they have together? _____

Max's book has 150 pages. Jose's book has 350 pages. How many pages do the two books together have? _____

250 + 150	440 + 360	170 + 170	190 + 190	240 + 280	360 + 270
230 + 680	750 + 240	390 + 180	130 + 180	240 + 170	870 + 80
650 + 260	770 + 160	190 + 80	340 + 530	680 + 260	560 + 340
253 + 154	326 + 291	172 + 181	162 + 195	441 + 382	592 + 184

Alex has 270 marbles and Dick has 280.
How many do they have together? _____

Mary's book has 166 pages. Jane's book has 192 pages. How many pages do the two books together have? _____

Bill has saved 194 pennies and his brother has saved 253. How many have they saved together? _____

5 5 5 5	5 5 6 6	5 5 6 7	4 5 6 8	5 5 7 8

5 5 8 9	5 6 9 4	5 7 8 6	6 9 5 7	7 8 5 9

15 15 15 15	15 15 16 16	15 15 16 38	15 15 27 38	14 16 25 27

115 115 125 125	105 215 216 216	115 215 317 108	114 206 125 228	216 324 105 427

$\frac{1}{2}$ = One half

△ △ △ △

Color two triangles.

$\frac{1}{2}$ of 4 is _____

○ ○ ○ ○ ○ ○

Color three circles.

$\frac{1}{2}$ of 6 is _____

John has ten toys. He gives half of them away.

How many does he have left? _____

$\frac{1}{2}$ of 6 is _____

$\frac{1}{2}$ of 8 is _____

$\frac{1}{2}$ of 10 is _____

$\frac{1}{2}$ of 12 is _____

$\frac{1}{2}$ of 14 is _____

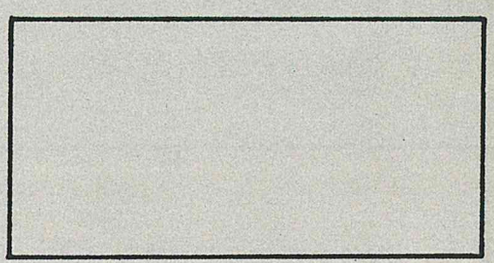
$\frac{1}{2}$ of 16 is _____

○ ○ ○ ○ ○ ○

○ ○ ○ ○ ○ ○

○ ○ ○ ○ ○ ○

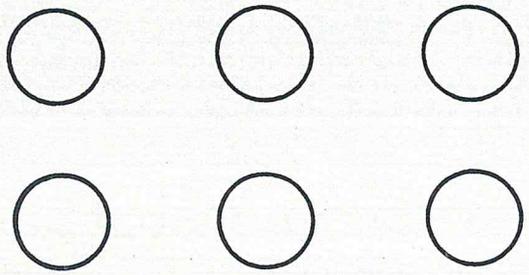
Color green one half of the balls.



Color red one half of the rectangle.

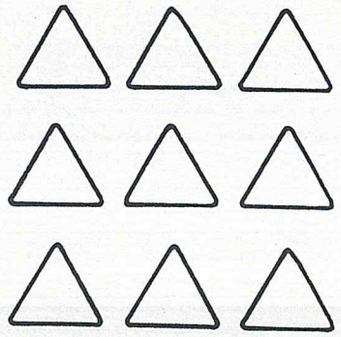
Review

$\frac{1}{3}$ = One third



Color two circles

$\frac{1}{3}$ of 6 is _____



Color three triangles

$\frac{1}{3}$ of 9 is _____

Mary has six dolls. She gives one third of them away. How many does she have left? _____

$\frac{1}{3}$ of 12 is _____

$\frac{1}{3}$ of 15 is _____

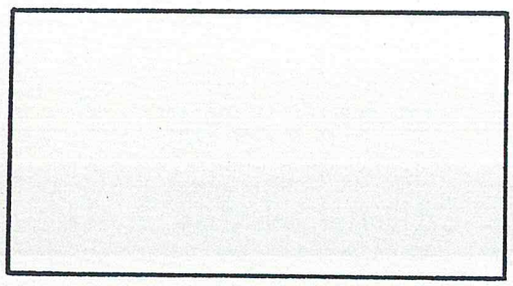
$\frac{1}{3}$ of 18 is _____

$\frac{1}{3}$ of 3 is _____

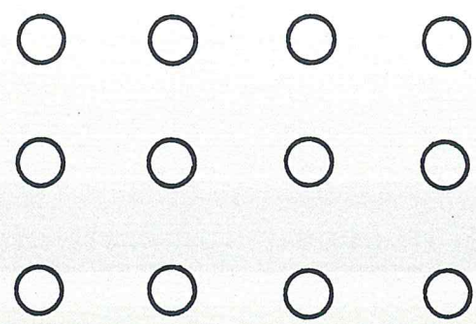
$\frac{1}{3}$ of 6 is _____

$\frac{1}{3}$ of 9 is _____

Color red one third of the rectangle.



Color green one third of the balls.



The set of numbers greater than six and less than ten is _____

The set of all y's such that $12 < y$ and $y < 16$ is _____

$\{n: 0 < n < 4\} =$ _____

$\{m: 100 < m < 102\} =$ _____

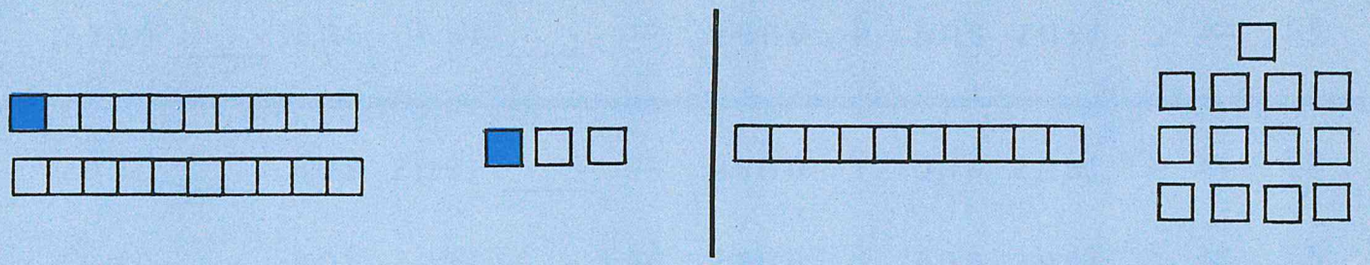
The set of numbers greater than twenty and less than 24 is _____

The set of all n's such that n is greater than five and less than nine is _____

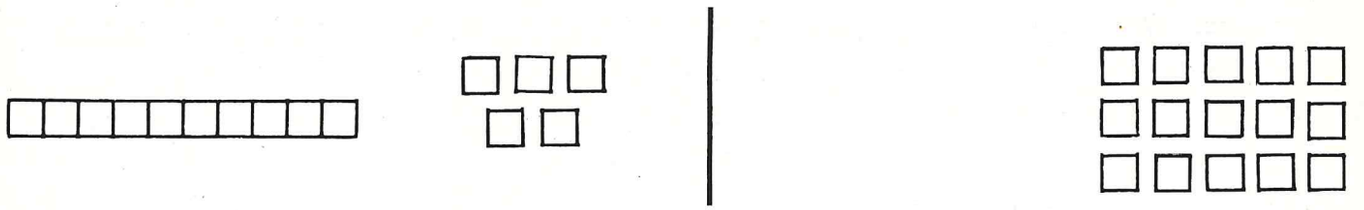
Part 15 Regrouping in Subtraction

6 − 3 = 3	4 − 2	5 − 5	8 − 2	10 − 6	11 − 2
14 − 7	16 − 9	10 − 7	15 − 8	19 − 8	12 − 7
10 − 2	13 − 5	16 − 7	11 − 6	17 − 9	13 − 9
15 − 6	17 − 8	13 − 8	19 − 5	11 − 9	14 − 8

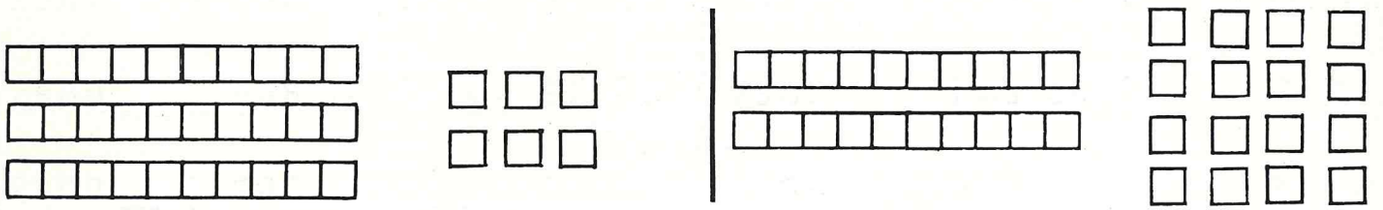
28 − 6 = 22	34 − 2	27 − 5	45 − 4	39 − 7	58 − 5
36 − 14	19 − 13	23 − 11	37 − 16	62 − 10	47 − 13
70 − 60	31 − 11	88 − 28	90 − 60	52 − 42	74 − 54



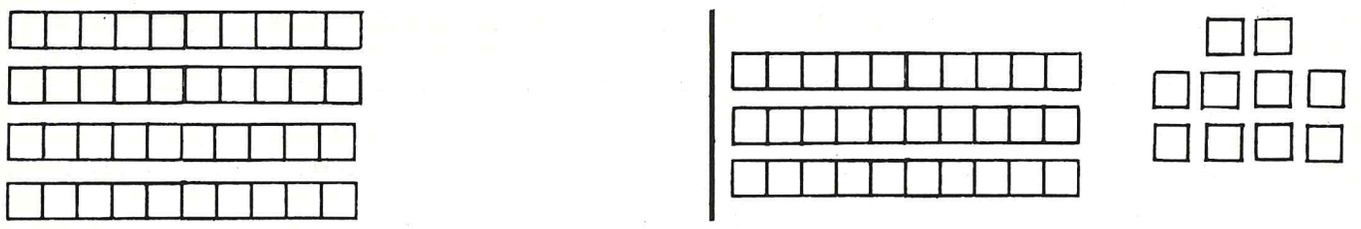
23 = 2 tens and 3 ones = 1 ten and 13 ones



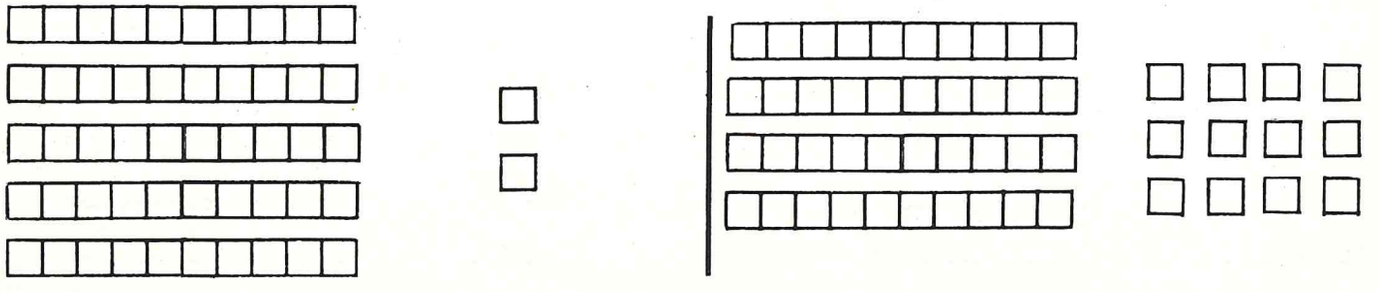
15 = ____ tens and ____ ones = ____ tens and ____ ones



36 = ____ tens and ____ ones = ____ tens and ____ ones



40 = ____ tens and ____ ones = ____ tens and ____ ones



52 = ____ tens and ____ ones = ____ tens and ____ ones

24 = 2 tens and 4 ones = ____ ten and ____ ones

37 = 3 tens and 7 ones = ____ tens and ____ ones

45 = 4 tens and 5 ones = ____ tens and ____ ones

56 = 5 tens and 6 ones = ____ tens and ____ ones

72 = 7 tens and 2 ones = ____ tens and ____ ones

53 = 5 tens and 3 ones = ____ tens and ____ ones

61 = 6 tens and 1 one = ____ tens and ____ ones

74 = ____ tens and ____ ones

38 = ____ tens and ____ ones

47 = ____ tens and ____ ones

66 = ____ tens and ____ ones

51 = ____ tens and ____ ones

93 = ____ tens and ____ ones

68 = ____ tens and ____ ones

17 = ____ tens and ____ ones

80 = ____ tens and ____ ones

29 = ____ tens and ____ ones

4 tens and 15 ones
− 2 tens and 7 ones
____ tens and ____ ones

9 tens and 18 ones
− 1 ten and 9 ones
____ tens and ____ ones

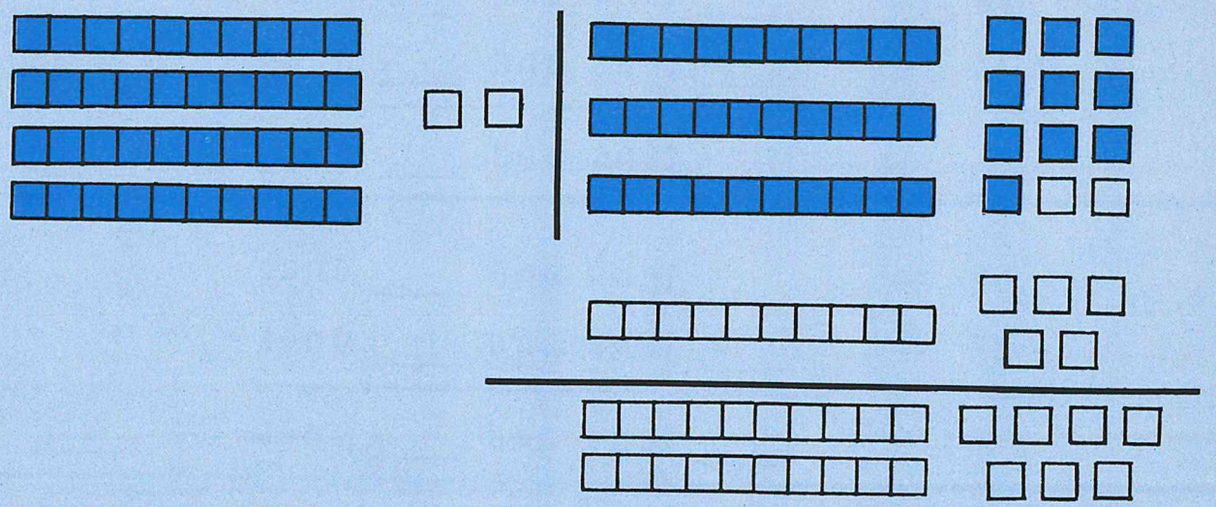
6 tens and 12 ones
− 5 tens and 8 ones
____ tens and ____ ones

3 tens and 13 ones
− 2 tens and 6 ones
____ tens and ____ ones

$$\begin{array}{r} 42 \\ -15 \\ \hline \end{array}$$

Regroup the tens and ones.

42 = 4 tens and 2 ones = 3 tens and 12 ones.



$$\begin{array}{r} -15 \\ \hline 27 \end{array}$$

41 = 4 tens and 1 one = 3 tens and 11 ones

$$\begin{array}{r} -16 \\ \hline \end{array} = -1 \text{ ten and } 6 \text{ ones} = \underline{\quad} - 1 \text{ ten and } 6 \text{ ones}$$

____ tens and ____ ones

53 = 5 tens and 3 ones = 4 tens and 13 ones

$$\begin{array}{r} -27 \\ \hline \end{array} = -2 \text{ tens and } 7 \text{ ones} = \underline{\quad} - 2 \text{ tens and } 7 \text{ ones}$$

____ tens and ____ ones

70 = 7 tens and 0 ones = ____ tens and ____ ones

$$\begin{array}{r} -42 \\ \hline \end{array} = -4 \text{ tens and } 2 \text{ ones} = -\underline{\quad} \text{ tens and } \underline{\quad} \text{ ones}$$

____ tens and ____ ones

88 = 8 tens and 8 ones = ____ tens and ____ ones

$$\begin{array}{r} -39 \\ \hline \end{array} = -3 \text{ tens and } 9 \text{ ones} = -\underline{\quad} \text{ tens and } \underline{\quad} \text{ ones}$$

____ tens and ____ ones

42 = 3 tens and 12 ones

− 26 = − ____ tens and ____ ones

____ ____ ten and ____ ones = ____

---

54 = ____ tens and ____ ones

− 38 = − ____ tens and ____ ones

____ ____ tens and ____ ones = ____

---

60 = ____ tens and ____ ones

− 47 = − ____ tens and ____ ones

____ ____ tens and ____ ones = ____

---

24 = ____ tens and ____ ones

− 19 = − ____ tens and ____ ones

____ ____ tens and ____ ones = ____

---

73 = ____ tens and ____ ones

− 37 = − ____ tens and ____ ones

____ ____ tens and ____ ones = ____

---

91 = ____ tens and ____ one

− 46 = − ____ tens and ____ ones

____ ____ tens and ____ ones = ____

---

85 = ____ tens and ____ ones

− 59 = − ____ tens and ____ ones

____ ____ tens and ____ ones = ____

84	=	7 tens and 14 ones	=	84
− 26	=	− 2 tens and 6 ones	=	− 26
		5 tens and 8 ones	=	58

47	=	___ tens and ___ ones	=	47
− 29	=	− ___ tens and ___ ones	=	− 29
		___ tens and ___ ones	=	___

50	=	___ tens and ___ ones	=	50
− 15	=	− ___ tens and ___ ones	=	− 15
		___ tens and ___ ones	=	___

72	=	___ tens and ___ ones	=	72
− 47	=	− ___ tens and ___ ones	=	− 47
		___ tens and ___ ones	=	___

95	=	___ tens and ___ ones	=	95
− 58	=	− ___ tens and ___ ones	=	− 58
		___ tens and ___ ones	=	___

32	=	___ tens and ___ ones	=	32
− 14	=	− ___ tens and ___ ones	=	− 14
		___ tens and ___ ones	=	___

23	=	___ tens and ___ ones	=	23
− 9	=	− ___ tens and ___ ones	=	− 9
		___ tens and ___ ones	=	___

Find the differences.

6 16 76 − 58	2 18 38 − 16	7 16 86 − 57	5 12 62 − 35	8 13 93 − 44	4 14 54 − 47
5 15 65 − 48	8 12 92 − 78	3 10 40 − 29	6 15 75 − 46	5 11 61 − 24	7 13 83 − 68
1 18 28 − 9	7 14 84 − 39	5 13 63 − 55	7 10 80 − 58	6 12 72 − 49	4 11 51 − 36

Sue did 36 pages in her workbook.
Ed did 52 pages in his workbook.
How many more pages did Ed do?

4 12
52
− 36

_____

Dick had 75 cents, but he spent 36 cents. How much does he have left?

_____

Mother baked two dozen cup cakes. She took 18 cup cakes to the Brownies. How many are left?

_____

Find the differences.

63 − 27	71 − 33	54 − 46	40 − 28	37 − 19	85 − 37

77 − 69	32 − 18	43 − 17	91 − 76	24 − 9	56 − 38

Dave had 32 toy cowboys. He lost 17 of them. How many does he have left?

_____

Bill's mother has three dozen oranges. The family ate 14 oranges for lunches. How many does she have left?

_____

Judy has 12 dresses for her doll. Ann has 8 for her doll. How many more does Judy have?

_____

65 − 29	44 − 17	90 − 37	83 − 67	53 − 46	80 − 61

Mary had 84 pieces of candy for a party. There were 6 pieces left. How many pieces did the children at the party eat?

_____

John read a book with 96 pages. Tom's book had 74 pages. How many more pages did John read?

_____

Sally has 50 cents. She spends 35 cents for lunch. How much does she have left?

_____

Subtraction

60 − 26	73 − 67	68 − 39	95 − 47	42 − 38	30 − 14
95 − 89	61 − 49	90 − 85	33 − 24	65 − 49	96 − 58
83 − 34	25 − 17	88 − 33	41 − 27	92 − 78	52 − 28
31 − 27	78 − 49	95 − 46	67 − 58	80 − 53	73 − 39

76 − 34	83 − 19	38 − 18	54 − 27	91 − 44	60 − 55

88 − 62	45 − 23	31 − 19	62 − 28	77 − 58	22 − 16

57 − 49	99 − 72	83 − 25	26 − 6	40 − 13	78 − 69

Betty counted 42 cows on a ride in the country.
Her brother counted 37 cows.
How many more did Betty count? _____

Jane now has 24 picture postcards.
How many will she have left
if she gives nine to Tim? _____

There are 29 children in Sara's class.
The teacher has two dozen new pencils.
Will she have enough for the class? _____

Jim has 37 cents. Mary has 45 cents.
Together they spend 75¢ on a gift.
How much do they have left? _____

Review

{Mary, Dick} ∪ {Bill} = _____

{1, 3, 5} ∪ {2, 4, 6} = _____

{Mary, Susan} − {Mary} = _____

{1, 7, 11, 12} − {12, 7} = _____

{ } − { } = _____

{1, 2, 4} ∪ _____ = {1, 2, 4, 5, 8}

{Bill, Tom} ∪ _____ = {Tom, Bill, Joe}

{0, 4, 6, 10} − _____ = {0, 6}

{125, 130, 209} − _____ = {209, 125}

{Bill, Harry, Joe} − _____ = {Joe, Harry}

{1, 2, 3} − _____ = {1, 2, 3}

{1, 2} − _____ = { }

The set of numbers greater than ten and less than seventeen is _____.

The set of all n's such that $7 < n < 13$ is _____.

$\{y : 11 < y < 15\} =$ _____

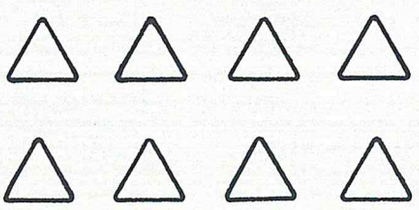
$\{m : 26 < m < 30\} =$ _____

The set of numbers greater than thirty and less than 35 is _____.

$\{n : 901 < n < 905\} =$ _____

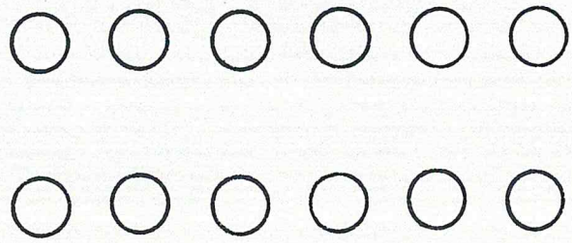
Review

$\frac{1}{4}$ = One fourth



Color 2 triangles.

$\frac{1}{4}$ of 8 is _____.



Color 3 circles.

$\frac{1}{4}$ of 12 is _____.

Joe has 12 pieces of candy. He gives one fourth of them to his sister. How many does he give her? _____

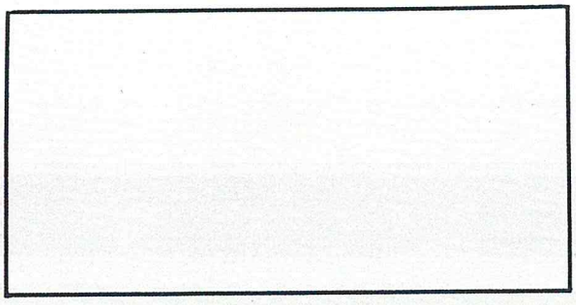
$\frac{1}{4}$ of 4 is _____

$\frac{1}{4}$ of 8 is _____

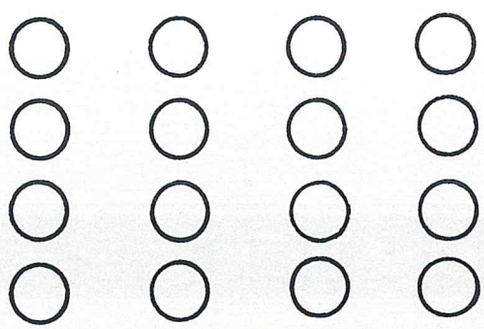
$\frac{1}{4}$ of 12 is _____

$\frac{1}{4}$ of 16 is _____

Color blue one fourth of the rectangle.



Color orange one fourth of the balls.



Review

26 + 27	38 + 25	19 + 17	35 + 45	56 + 26	74 + 18
18 + 29	46 + 19	17 + 37	55 + 25	64 + 17	19 + 71
170 + 240	160 + 150	380 + 220	440 + 290	520 + 280	790 + 180
153 + 256	149 + 170	246 + 391	492 + 385	395 + 241	773 + 156

Jose's book has 187 pages. Maria's book has 172 pages. How many pages do the two books together have? _____

Jean drove 263 miles with her father on Monday, and 362 miles on Tuesday. How far did she go during the two days?

_____

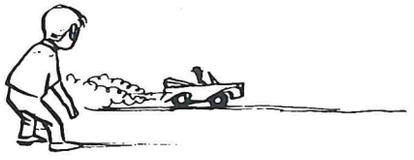
Bob drove 282 miles with his father on Monday, and 333 miles on Tuesday. Did Bob go farther then Jean during the two days? _____

Part 16 Word Problems and Equations

Tom has 2 cents and Joe has 3 cents.

How many cents do they have together?

_____



Mary saw three cars. Bob saw one car.

Mary saw how many more cars than Bob?

_____

John has two apples and four bananas.

How many pieces of fruit does he have?

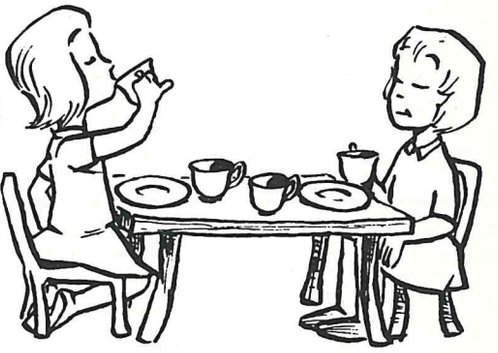
_____

There are six marbles in the ring. Sam takes three of them. How many are left?

_____

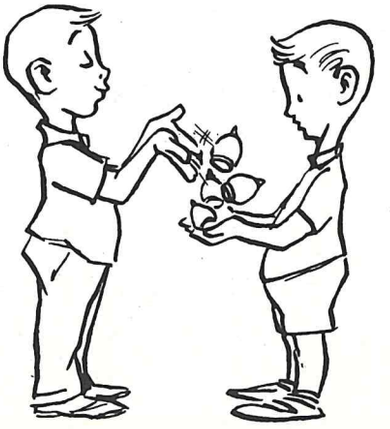
Mary has two oranges, three apples and four bananas. How many pieces of fruit does she have? _____

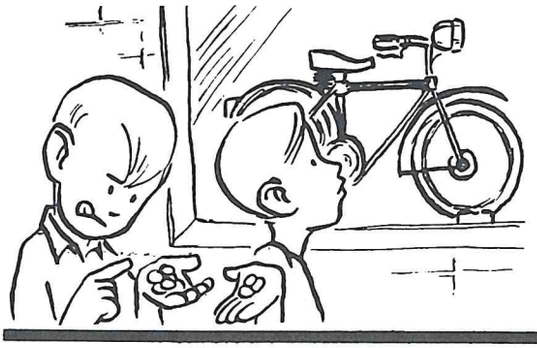
Sue has two plates. She has two more cups than plates. How many cups does she have? _____



Bill has three bananas, four apples and no oranges. How many pieces of fruit does he have? _____

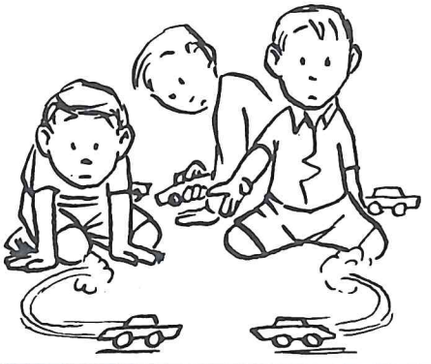
John has four tops. He gives them all to Sam. How many does John have left? _____





Bill has 6 cents and Tom has 3 cents. How many cents do they have together? _____

Susan has three dolls, Mary has two dolls, and Betty has one. How many do they have together? _____



John had five toy cars. He gave three of them away. How many does he have left? _____

Mary and Betty together have seven apples. Three of them are Betty's. How many apples does Mary have? _____

Bill and Tom together have eight marbles. Six of the marbles are Bill's. How many does Tom have? _____

John has 5 cents and Bill has 4 cents.
How many cents do they have together?

_____

Mary has 3 boy dolls and 10 girl dolls.
How many dolls does she have in all?

_____

Betty had six pieces of candy. She ate two of them. How many does she have left?

_____

John has two toy cars. Dick has four toy cars. Bill has three toy cars. How many do they have together?

_____

Dick has three cents. Jane has four cents. Tom has three cents. How many cents do they have together?

_____

Bill has a nickel. John has a nickel and a penny. How many cents do they have together?

_____

Betty has six apples. Jane has seven apples. They give two to Mary. How many apples do Betty and Jane have left?

_____

Sally has a nickel and three pennies.
She gives two pennies to Dick.
How much money does Sally have left?

_____

Solve the equation for n

$n + 6 = 10$

$n = 4$

Solve the equation $m - 3 = 6$ $m =$ ____	Solve the equation $10 - z = 3$ $z =$ ____
Solve for z $z + 10 = 20$ $z =$ ____	Solve for y $y + 2 + 3 = 7$ $y =$ ____
Solve the equation $m - 5 = 8$ $m =$ ____	Solve the equation $n + 100 = 200$ $n =$ ____
Solve for s $200 + s = 300$ $s =$ ____	Solve for t $t - 10 = 10$ $t =$ ____

Dick and Jane together have twelve apples. Seven of the apples are Jane's. How many of the apples are Dick's?

_____

Five apples are three more than Mary has.

a. Write the equation $5 = 3 + m$

b. Solve the equation for m. $m = 2$

Six apples are two more than Mary has.

a. Write the equation. $6 = 2 + m$

b. Solve the equation for m. $m =$ ____

Seven oranges are two more than Nan has.

a. Write the equation. $7 = 2 + n$

b. Solve the equation for n. $n =$ ____

Ten dolls are three more than Mary has.

a. Write the equation. $10 = 3 + m$

b. Solve the equation for m. $m =$ ____

Thirteen dolls are four more than Mary has.

a. Write the equation. ____ = ____ + ____

b. Solve the equation for m. $m =$ ____

Twelve cents are five more than Ned has.

a. Write the equation. ____ = ____ + ____

b. Solve the equation for n. $n =$ ____

Bill has eight apples, which is three more than Tom has.

a. Write the equation.

b. Solve for t.

$8 = 3 + t$

$t = ___$

Mary has twelve oranges, which is five more than Dick has.

a. Write the equation.

b. Solve the equation.

$12 = 5 + d$

$d = ___$

Sue and Jane together have fourteen dolls, which is seven more than Betty has.

a. Write the equation.

b. Solve for b.

$14 = ___ + b$

$b = ___$

Tom and Harry have fifteen bananas. This is eight more than Mary has.

a. Write the equation.

b. Solve the equation.

$15 = ___ + m$

$m = ___$

Mary and Dick together have thirteen books they want to sell. This is four more than Jane has.

a. Write the equation.

b. Solve for j.

$___ = ___ + ___$

$j = ___$

Bill and Joe have built ten airplanes. This is three more than Tom has.

a. Write the equation.

b. Solve for t.

$___ = ___ + ___$

$t = ___$

Bill has six oranges, and Ned has four less.

a. Write the equation.

b. Solve for n.

$n = 6 - 4$

$n = ___$

Mary has twelve dolls, and Betty has seven less.

a. Write the equation.

b. Solve the equation.

$b = 12 - ___$

$b = ___$

Sam has fourteen apples, and Tom has nine less.

a. Write the equation.

b. Solve for t.

$t = ___ - ___$

$t = ___$

Susan has fifteen cents, and Mary has eleven cents less.

a. Write the equation.

b. Solve the equation.

$m = ___ - ___$

$m = ___$

Bill and Tom together have thirteen toy airplanes, and Sam has six less.

a. Write the equation.

b. Solve for s.

$___ = ___ - ___$

$s = ___$

Sue and Jane together have fifteen dolls' dresses, and Betty has four less.

a. Write the equation.

b. Solve for b.

$___ = ___ - ___$

$b = ___$

After Bill gave John two apples, he had five left.

a. Write the equation. $b - 2 = 5$

b. Solve the equation for b. $b =$ ___

After Dick gave three cents to Susan, he had eight cents left.

a. Write the equation. $d - 3 =$ ___

b. Solve the equation for d. $d =$ ___

After Jane gave ten cents to Bob, she had three cents left.

a. Write the equation. ___ − ___ = ___

b. Solve the equation for j. $j =$ ___

After John gave a nickel to Tom, he had nine cents left.

a. Write the equation. ___ − ___ = ___

b. Solve the equation for j. $j =$ ___

After Mary gave a dime to Sue, she had six cents left.

a. Write the equation. ___ − ___ = ___

b. Solve the equation for m. $m =$ ___

Solve for m

$n = 2$

$m + n = 7$

$m + 2 = 7$

$m = 5$

Solve for n

$m = 5$

$m + n = 15$

$___ + n = 15$

$n = ___$

Solve for x

$y = 6$

$x + y = 13$

$x + ___ = 13$

$x = ___$

Solve for y

$x = 3$

$x + y = 16$

$___ + y = 16$

$y = ___$

Solve for s

$t = 10$

$s + t = 17$

$s + ___ = 17$

$s = ___$

Solve for t

$s = 9$

$s + t = 15$

$___ + t = 15$

$t = ___$

$n = 5$

$m + n = 10$

$m + ___ = 10$

$m = ___$

$n = 10$

$m + n = 20$

$m + ___ = 20$

$m = ___$

$n = 12$

$m + n = 19$

$m + ___ = 19$

$m = ___$

$m = 9$

$m + n = 18$

$___ + n = 18$

$n = ___$

$m = 11$

$m + n = 17$

$___ + n = 17$

$n = ___$

$m = 20$

$m + n = 40$

$___ + n = 40$

$n = ___$

Solve for n

$$m = 3$$
$$m + n = 4$$
$$___ + n = 4$$
$$n = ___$$

Solve for d

$$j = 4$$
$$d + j = 6$$
$$d + ___ = 6$$
$$d = ___$$

Solve for s

$$t = 7$$
$$s + t = 9$$
$$s + ___ = 9$$
$$s = ___$$

Solve for m

$$j = 3$$
$$j + m = 10$$
$$___ + m = 10$$
$$m = ___$$

Solve for q

$$t = 10$$
$$q + t = 12$$
$$q + ___ = 12$$
$$q = ___$$

Solve for n

$$m = 11$$
$$m + n = 13$$
$$___ + n = 13$$
$$n = ___$$

Solve for d

$$g = 2$$
$$d - g = 1$$
$$d - ___ = 1$$
$$d = ___$$

Solve for s

$$t = 3$$
$$s - t = 5$$
$$s - ___ = 5$$
$$s = ___$$

Solve for p

$$q = 0$$
$$p - q = 6$$
$$p - ___ = 6$$
$$p = ___$$

Solve for g

$$f = 4$$
$$f - g = 0$$
$$___ - g = 0$$
$$g = ___$$

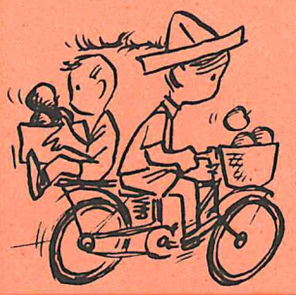
Solve for b

$$a = 7$$
$$a - b = 3$$
$$___ - b = 3$$
$$b = ___$$

Solve for d

$$c = 10$$
$$c - d = 2$$
$$___ - d = 2$$
$$d = ___$$

(1) Bill has six apples. (2) Jack and Bill together have ten apples. How many does Jack have?



a. Write the equation for sentence (1).

b. Write the equation for sentence (2).

c. Solve for j.

$b = 6$

$j + b = 10$

$j + 6 = 10$

$j = 4$

(1) Mary has seven cents. (2) Sally and Mary together have eleven cents. How many cents does Sally have?

a. Write the equation for sentence (1).

b. Write the equation for sentence (2).

c. Solve for s.

$m = ___$

$s + m = ___$

$s + ___ = ___$

$s = ___$

(1) Tom has nine snakes. (2) Bill and Tom together have thirteen snakes. How many snakes does Bill have?

a. Write the equation for sentence (1)

b. Write the equation for sentence (2)

c. Solve for b.

$t = ___$

$___ + ___ = ___$

$b + ___ = ___$

$b = ___$

(1) Jim has eight oranges. (2) Mary and Jim together have twelve oranges. How many does Mary have?

a Write the equation for (1)

b. Write the equation for (2)

c. Solve for m.

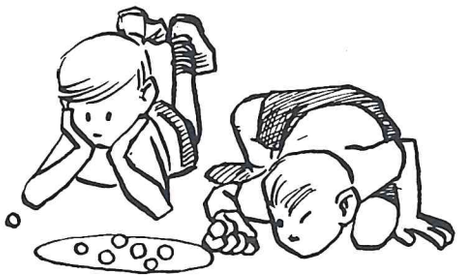
$j = ___$

$___ + ___ = ___$

$___ + ___ = ___$

$m = ___$

John has seven marbles. Bill and John together have fifteen. How many does Bill have?

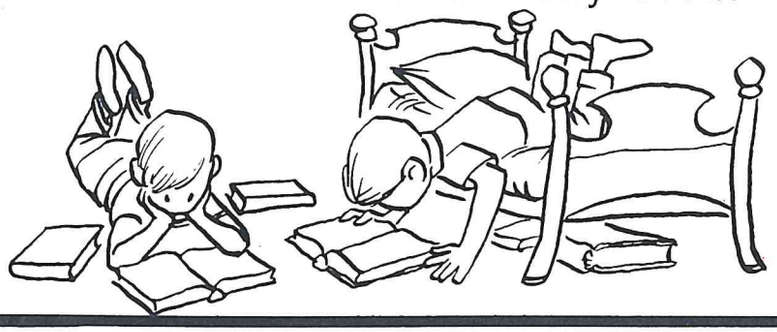


$$j = 7$$
$$j + b = 15$$
$$___ + b = 15$$
$$b = ___$$

Susan has twenty cents. Jane and Susan together have forty cents. How much money does Jane have?

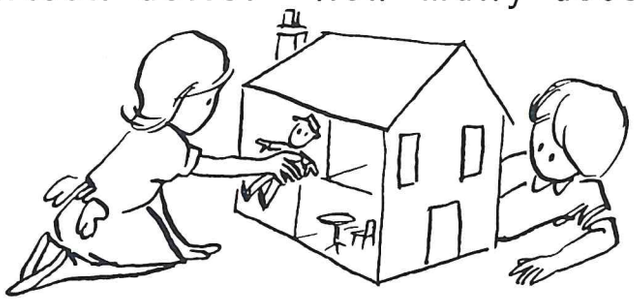
$$s = 20$$
$$j + s = 40$$
$$j + ___ = 40$$
$$j = ___$$

Harry has twelve books. Dick and Harry together have nineteen books. How many books does Dick have?



$$h = ___$$
$$d + h = ___$$
$$d + ___ = ___$$
$$d = ___$$

Alice has nine dolls. Sue and Alice together have eighteen dolls. How many does Sue have?



$$a = ___$$
$$s + a = ___$$
$$s + ___ = ___$$
$$s = ___$$

Betty has one doll. Mary and Betty together have five dolls. Jane and Mary together have six dolls. How many dolls does each girl have?

$b = 1$

$m + b = 5$

$m = ___$

$j + m = 6$

$j = ___$

Joe has two cents. Harry and Joe together have six cents. Bill and Harry together have seven cents. How many cents does each have?

$j = 2$

$h + j = 6$

$h = ___$

$b + h = 7$

$b = ___$

Mary has three cents. Betty and Mary together have seven cents. Sue and Betty together have six cents. How many cents does each have?

$m = ___$

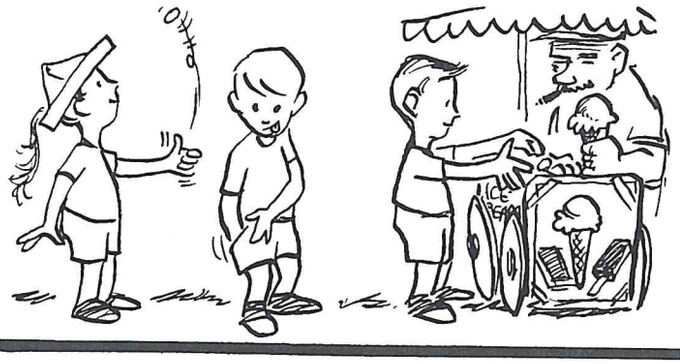
$b + m = ___$

$b = ___$

$s + b = ___$

$s = ___$

Bill has four cents. Tom and Bill together have ten cents. Mark and Tom together have eleven cents. How many cents does each have?



$b = ___$

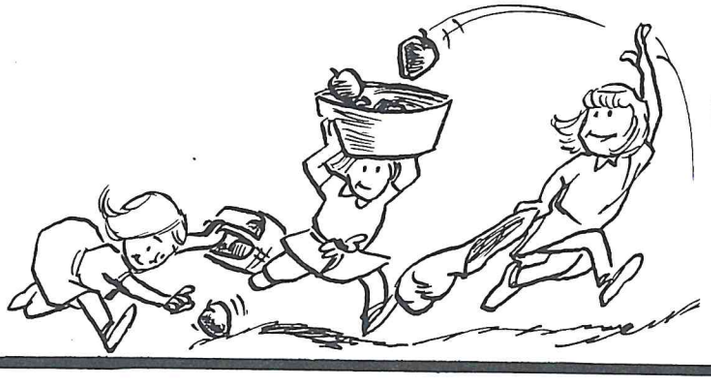
$t + b = ___$

$t = ___$

$m + t = ___$

$m = ___$

Sue has five apples. Betty and Sue together have a dozen apples. Jane and Betty together have ten apples. How many apples does each girl have?



$s = ___$

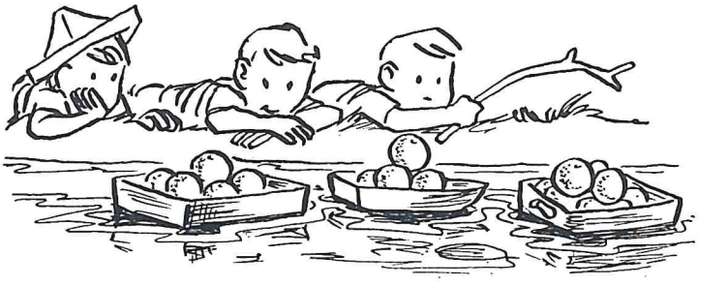
$b + s = ___$

$b = ___$

$j + b = ___$

$j = ___$

Bill has half a dozen oranges. Joe and Bill together have thirteen oranges. Sam and Joe together have fifteen oranges. How many oranges does each boy have?



$b = ___$

$j + b = ___$

$j = ___$

$s + j = ___$

$s = ___$

Sue has one half dozen apples. Mary has five more than Sue. Jane and Mary together have fifteen apples. How many does each girl have?

$s = 6$

$m = s + 5$

$m = 11$

$j + m = 15$

$j = 4$

Sam has a nickel. Joe and Sam together have fifteen cents. Joe has five cents less than Bill. How much money does each have?

$s = 5$

$j + s = 15$

$j = ___$

$b = j + 5$

$b = _ + 5$

$b = ___$

Bill has one dozen oranges. He has four more than Joe, but Sam and Joe together have sixteen oranges. How many does each boy have?

$b = ___$

$b = j + _$

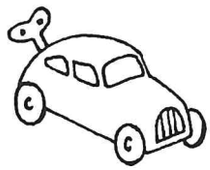
$j = ___$

$s + j = ___$

$s = ___$

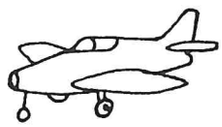
Mary has a dime. She buys four cents worth of candy. She gets back in change _____ ¢

Joe has two nickels. He pays seven cents for a toy car. He gets back _____ ¢ in change.



Sally has four nickels. She pays 17¢ for a pencil. Her change is _____ cents.

Bill has a quarter. He pays 20¢ for a toy. His change is .....

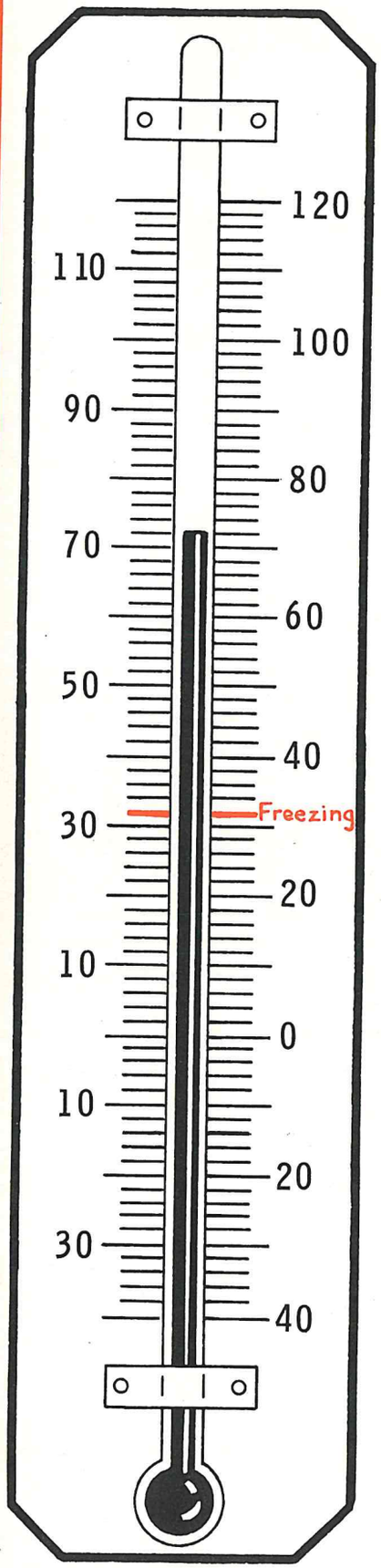


☐ 1 nickel ☐ 1 dime ☐ 2 nickels

Betty has a quarter. She pays fifteen cents for a doll. Her change is .....

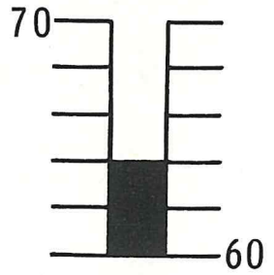
☐ 1 nickel ☐ 1 dime ☐ 2 dimes

John has two dimes. He pays eight cents for a toy. His change is _____ cents.

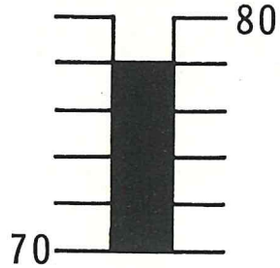


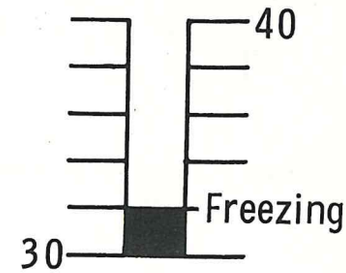
thermometer

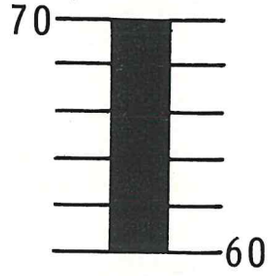
What is each temperature ?

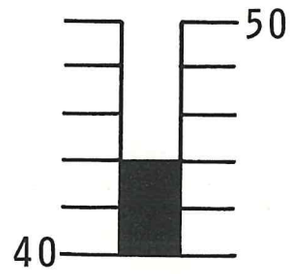


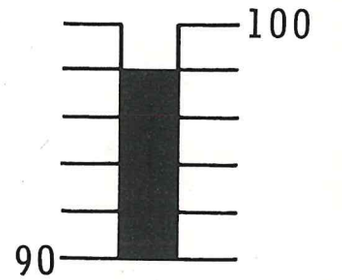
64 °



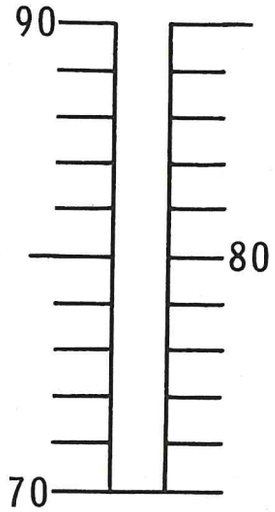




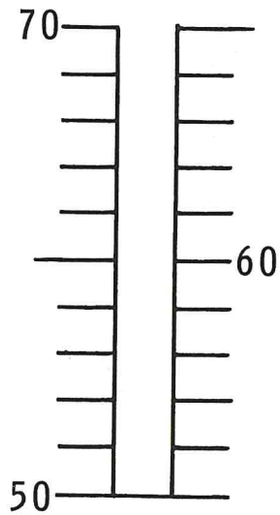




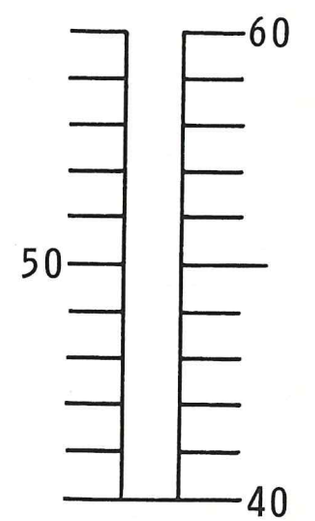
Mark the temperature.



78 °



66 °



54 °

Roman Numerals

1	2	3	4	5	6	7	8
I	II	III	IV	V	VI	VII	VIII

9	10	11	12
IX	X	XI	XII

III

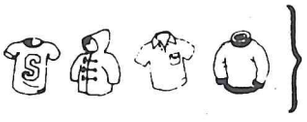
V

IV

II

N

N

N 

N

I

XI

V

III

IX

IV

VI

XII

VIII

II

X

VII

8

5

4

11

1

6

3

12

9

7

2

10

I + II = 3

V + V = ____

V + I = ____

X + I = ____

II + IV = ____

VI + VI = ____

IV + II = ____

The set of numbers greater than one and less than four is _____

The set of numbers greater than ten and less than thirteen is _____

The set of all n's such that $5 < n$ and $n < 10$ is _____

The set of all n's such that $21 < n$ and $n < 25$ is _____

$\{n: \ 1 < n \text{ and } n < 6\} =$ _____

$\{n: \ 11 < n \text{ and } n < 16\} =$ _____

$\{n: \ 8 < n \text{ and } n < 13\} =$ _____

Review

270 + 160	430 + 370	580 + 230	640 + 190	460 + 460	770 + 180
353 + 163	362 + 147	446 + 262	550 + 396	716 + 192	624 + 294
5 6 7	8 9 4	5 7 8	6 6 3	7 2 8	8 6 5
15 − 7	17 − 8	12 − 5	13 − 4	15 − 9	11 − 3
36 − 17	21 − 14	42 − 16	55 − 18	32 − 15	43 − 19

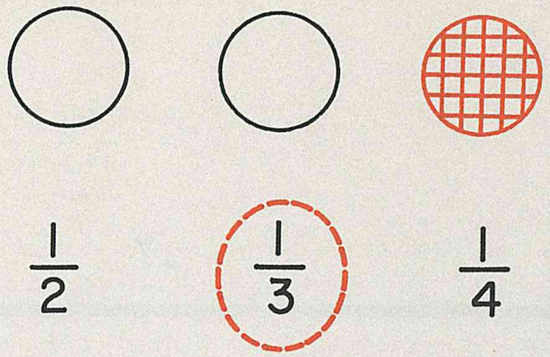
Trisha read 274 pages one week and 435 pages the next week. How many pages did she read in the two weeks?

_____

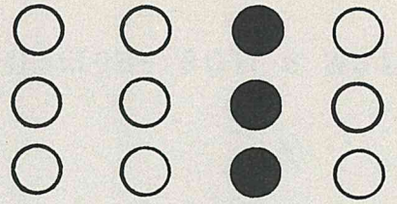
During the first week, Annie read 242 pages. How many more pages did Trisha read?

_____

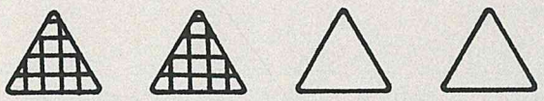
Review



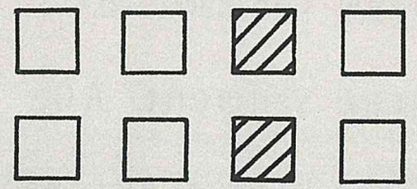
$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$



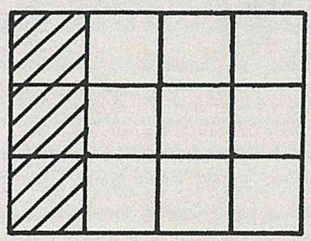
$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$



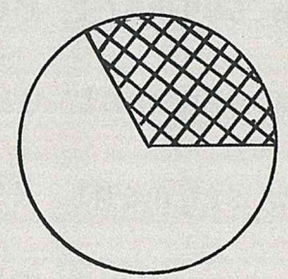
$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$



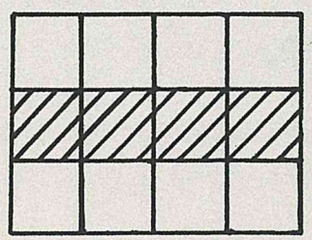
$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$



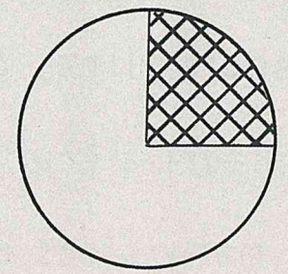
$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$



$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$



$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$



$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$

Part 17 More Geometry

Draw a line segment from X to Y.

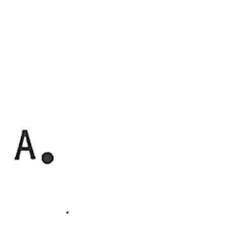
X.

.Y

Draw segment AB.

Draw segment BC.

Draw segment AC.



What kind of figure is ABC? _____

(triangle, line, circle, square)

Draw segment PQ.

Draw segment QR.

Draw segment RS.

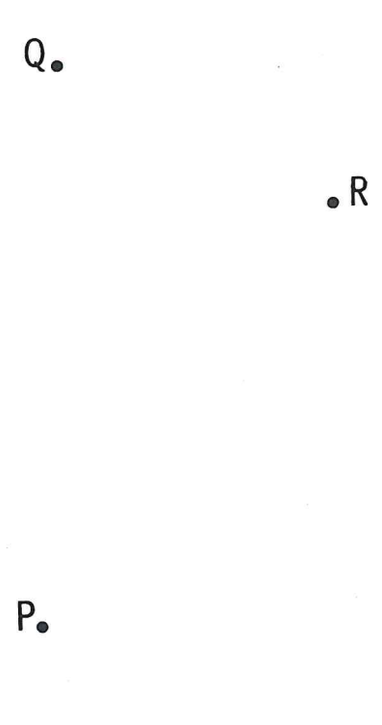
Draw segment SP.

What kind of figure

is PQRS? _____

(triangle, line, circle,

quadrilateral)

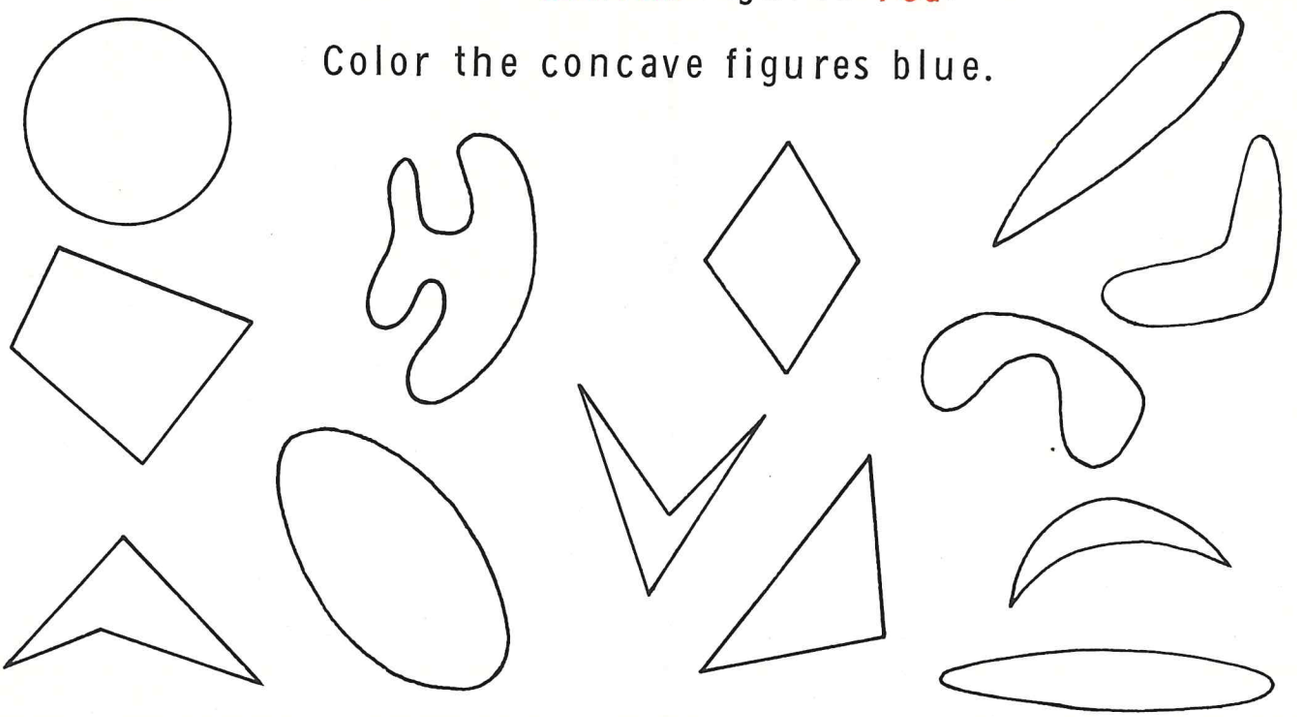


How many sides does a quadrilateral have? _____

How many sides does a triangle have? _____

Color the convex figures red.

Color the concave figures blue.



Draw a concave quadrilateral.

Draw a convex figure. Then draw a concave figure inside it.

Draw a line segment three inches long.

Draw a pentagon.

Circles are always _____.

(convex, concave, square)

256

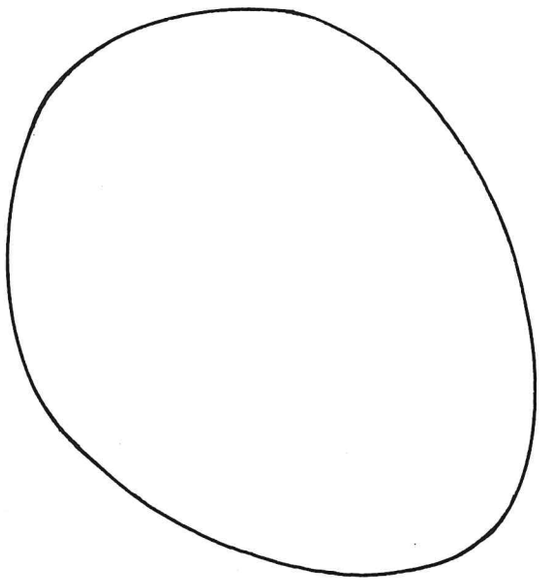
Draw a convex quadrilateral.

Draw a concave quadrilateral.

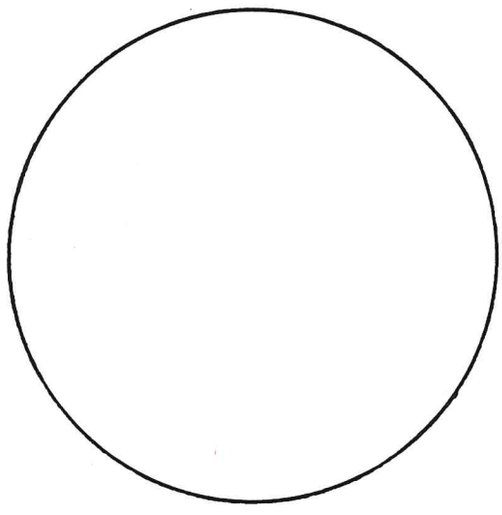
Triangles, circles and squares are always _____.

(convex, concave).

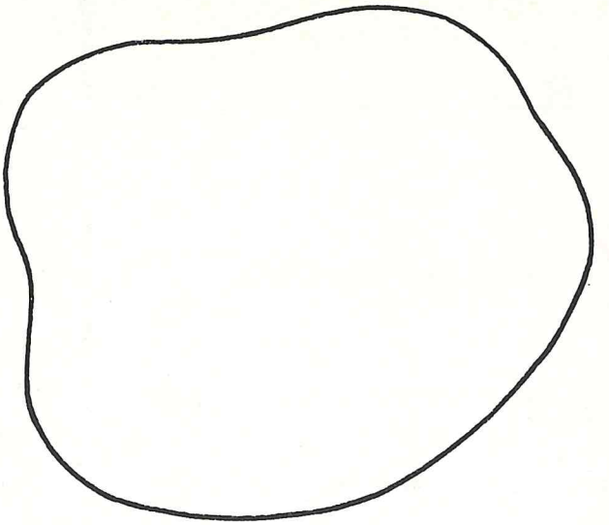
Draw a convex figure inside the curved figure.



Draw a concave figure inside the circle. Color the figure red.



Draw a triangle inside the curved figure.



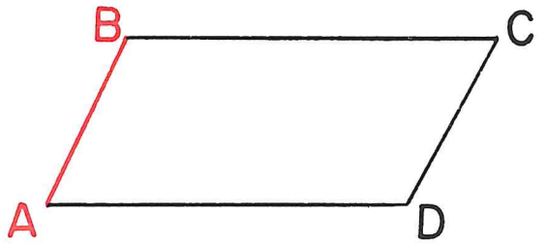
Color the inside of the curved figure which is outside the triangle.

Draw a convex figure.

Then draw a concave figure inside the convex figure.

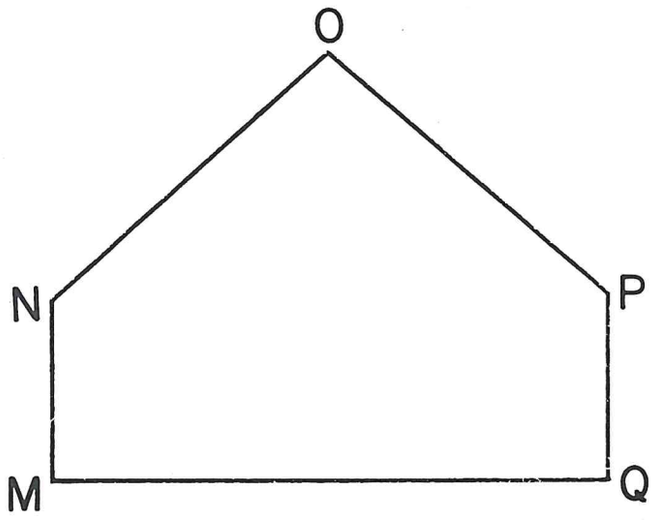
Color the inside of the convex figure which is outside the concave figure.

Draw a triangle. Then draw a quadrilateral inside the triangle.

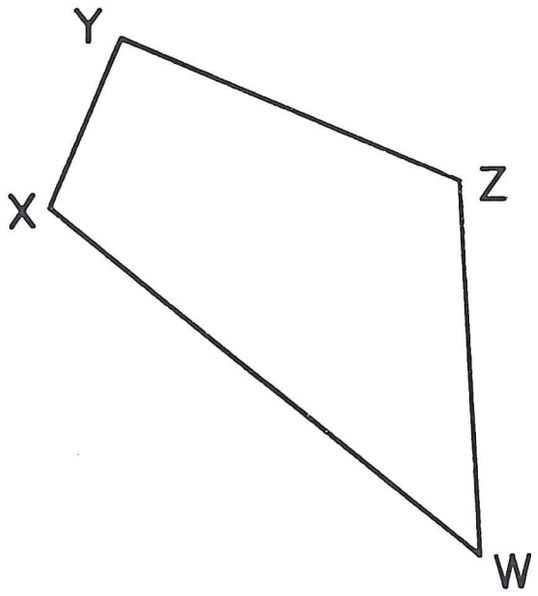


Segment AB is ____ in.
Segment BC is ____ in.
Segment CD is ____ in.
Segment DA is ____ in.

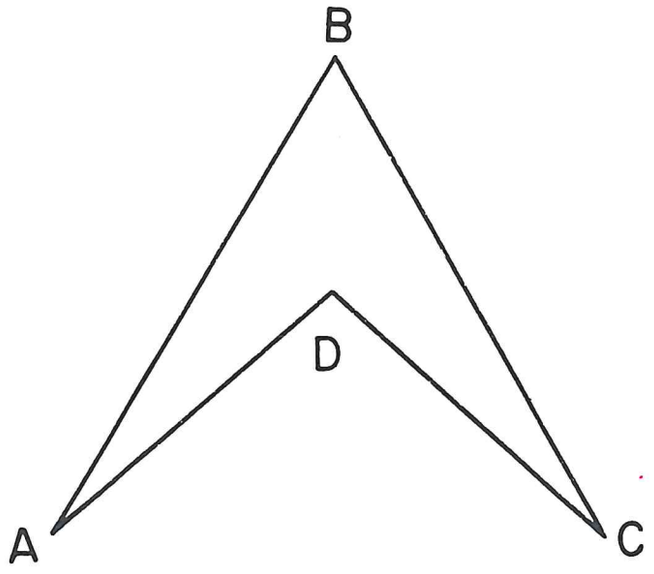
The perimeter of quadrilateral ABCD is ____ in.



The perimeter of pentagon MNOPQ is ____ in.

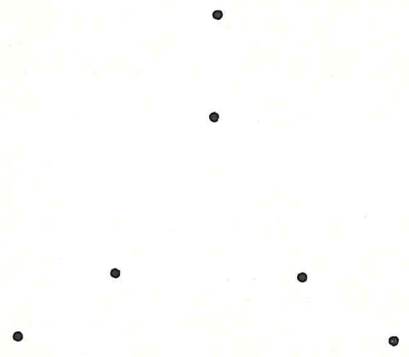


The perimeter of quadrilateral WXYZ is ____ in.



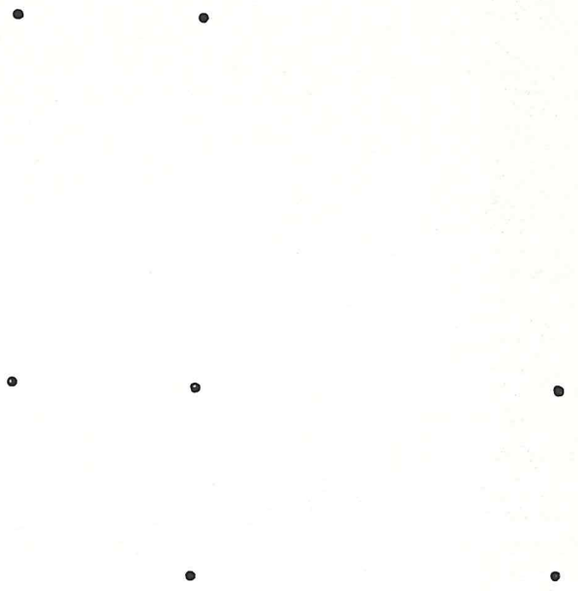
The perimeter of quadrilateral ABCD is ____ in.

Use three of the points to draw an equilateral triangle.



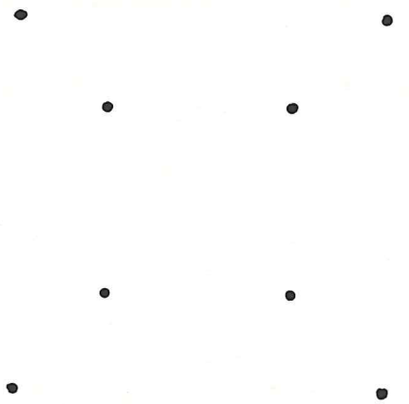
The perimeter of your triangle is _____ in.

Use four of the points to draw a rectangle.



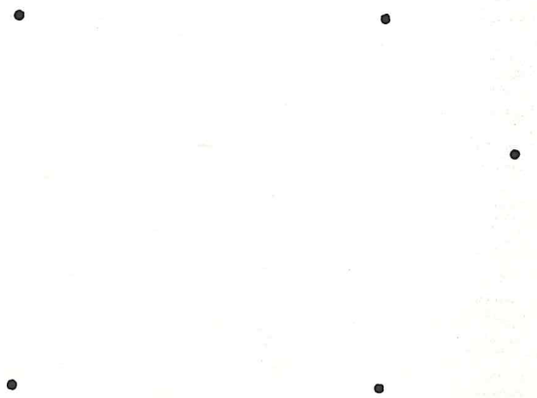
The perimeter of your rectangle is _____ in.

Use four of the points to draw a square.



The perimeter of your square is _____ in.

Use four of the points to draw a quadrilateral that is not a square.



$\{ \text{Mary, Jane} \} \subset$ _____

$\{1, 2, 3\} \subset$ _____

$\{2, 3\} \cup \{4, 12\} \subset$ _____

$\{20\} \cup \{30\} \subset$ _____

$\{ \text{Joe} \} \cup$ _____ $\subset \{ \text{Joe, Bill, Tom} \}$

$\{1\} \cup$ _____ $\subset \{1, 5\}$

$\{5\} \cup$ _____ $\subset \{5, 10, 15\}$

$\{4, 16\} \cup$ _____ $\subset \{4, 8, 12, 16\}$

$\{1, 2\} -$ _____ $\subset \{1, 3\}$

$\{2, 7\} -$ _____ $\subset \{2, 6\}$

$\{20, 40, 60\} -$ _____ $\subset \{10, 20\} \cup \{30\}$

$\{ \text{John, Mary} \} -$ _____ $\subset \{ \text{Mary} \} \cup \{ \text{Sally} \}$

The set of numbers greater than ten and less than fifteen is _____

The set of all y's such that $14 < y$ and $y < 19$ is _____

$\{n: \quad 1 < n < 5\} =$ _____

$\{n: \quad 11 < n < 15\} =$ _____

$\{n: 111 < n < 115\} =$ _____

$\{n: 911 < n < 915\} =$ _____

$\{n: 199 < n < 203\} =$ _____

The set of numbers greater than thirty and less than thirty four is the set of numbers _____

$\{m: 361 < m < 367\} =$ _____

Review

457 + 262	351 + 585	570 + 230	643 ÷ 292	295 + 170	199 + 170

47 − 18	52 − 24	33 − 16	62 − 34	58 − 39	70 − 45

7 7 8	5 9 4	9 7 3	8 7 6	6 6 9	7 8 9

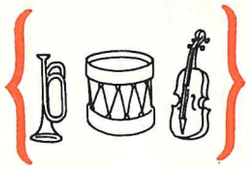
12 4 8	14 6 7	13 5 8	16 7 3	15 5 7	18 6 3

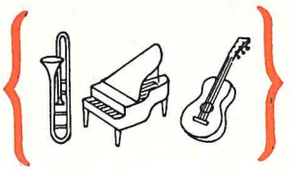
Sheila's father drove 394 miles on Monday, and 442 miles on Tuesday. How far did he drive during the two days?

_____

Mac has 82¢ and Jacob has 35¢.
How much more does Mac have?

_____

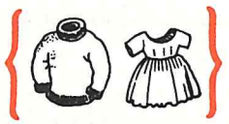


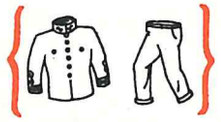


There are 2 sets of things.

There are 3 things in each set.

There are 6 things all together.

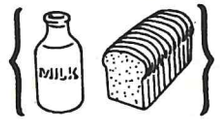




There are _____ sets of things.

There are _____ things in each set.

There are _____ things all together.



There are _____ sets of things.

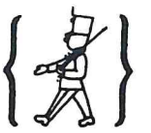
There are _____ things in each set.

There are _____ things all together.

There are _____ sets of things.

There are _____ things in each set.

There are _____ things all together.



There are _____ sets of things.

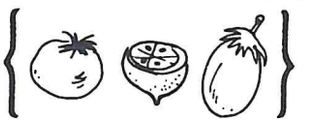
There is _____ thing in each set.

There are _____ things all together.

There are _____ sets of things.

There are _____ things in each set.

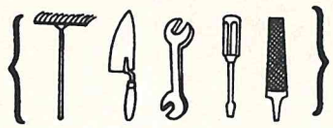
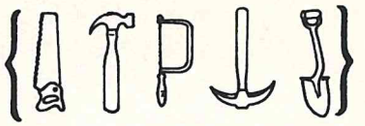
There are _____ things all together.



There are _____ sets of things.

There are _____ things in each set.

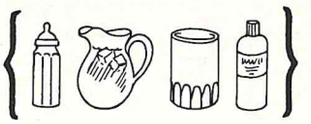
There are _____ things all together.

There are _____ sets of things.

There are _____ things in each set.

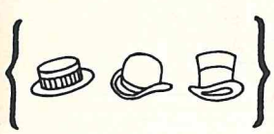
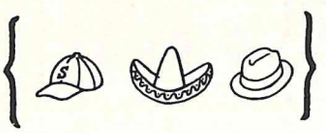
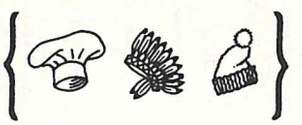
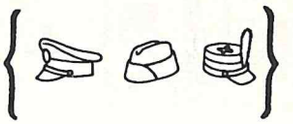
There are _____ things all together.



There are _____ sets of things.

There are _____ things in each set.

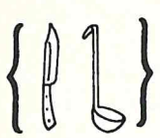
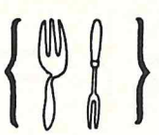
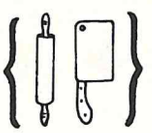
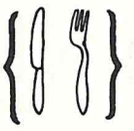
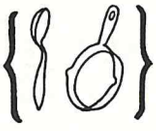
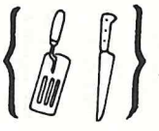
There are _____ things all together.

There are _____ sets of things.

There are _____ things in each set.

There are _____ things all together.

There are _____ sets of things.

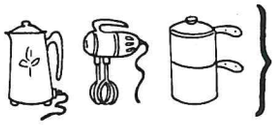
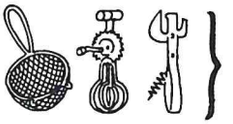
There are _____ things in each set.

There are _____ things all together.

N{ } + N{ } + N{ } = 6

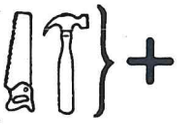
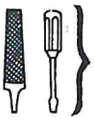
2 + 2 + 2 = 6

3 twos = 6

N{  } + N{  } = ____

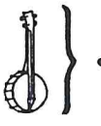
____ + ____ = ____

____ threes = ____

N{ } + N{ } + N{  } + N{  } = ____

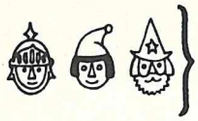
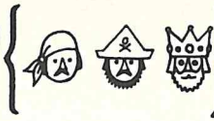
____ + ____ + ____ + ____ = ____

____ twos = ____

N{ } + N{ } + N{  } + N{ } = ____

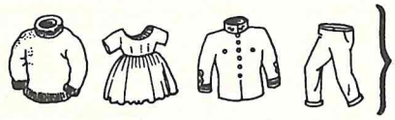
____ + ____ + ____ + ____ = ____

____ ones = ____

N{ } + N{  } + N{  } = ____

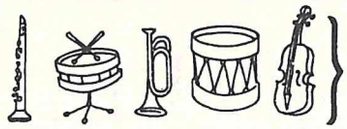
____ + ____ + ____ = ____

____ threes = ____

N{  } + N{ } = ____

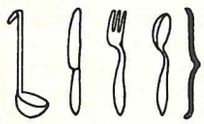
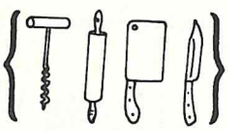
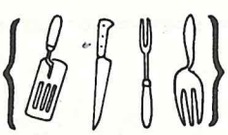
____ + ____ = ____

____ fours = ____

N{  } + N{ } = ____

____ + ____ = ____

____ fives = ____

N{  } + N{  } + N{  } = ____

____ + ____ + ____ = ____

____ fours = ____

N{ } + N{ } = ____

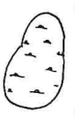
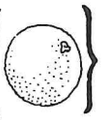
____ + ____ = ____

____ ones = ____

N{ } + N{ } + N{ } = ____

____ + ____ + ____ = ____

____ zeros = ____

N{ } + N{  } + N{ } + N{  } = ____

____ + ____ + ____ + ____ = ____

____ ones = ____

N{ } + N{ } + N{ } = ____

____ + ____ + ____ = ____

____ twos = ____

$2 + 2 + 2 + 2 + N\{$ $\} =$ _____

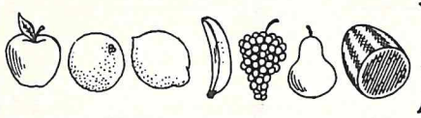
_____ twos = _____

$5 + 5 + N\{$ $\} =$ _____

_____ fives = _____

$6 + 6 =$ _____

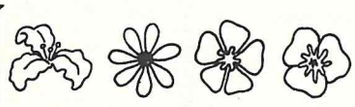
_____ sixes = _____

$7 + N\{$  $\} =$ _____

_____ sevens = _____

$3 + 3 + 3 + 3 + N\{$ $\} =$ _____

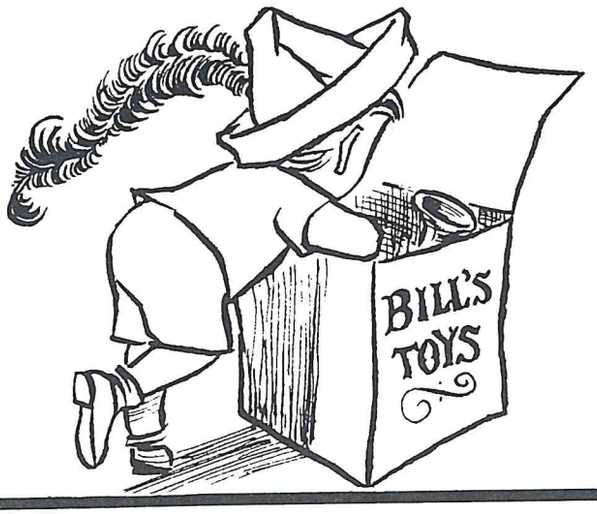
_____ threes = _____

$4 + 4 + N\{$  $\} =$ _____

_____ fours = _____

$2+2+2=____$ $____$ twos $=____$ $____$ times 2 $=____$	$5+5=____$ $____$ fives $=____$ $____$ times 5 $=____$
$3+3=____$ $____$ threes $=____$ $____$ times 3 $=____$	$6+6=____$ $____$ sixes $=____$ $____$ times 6 $=____$
$4+4=____$ $____$ fours $=____$ $____$ times 4 $=____$	$3+3+3+3=____$ $____$ threes $=____$ $____$ times 3 $=____$
$3+3+3=____$ $____$ threes $=____$ $____$ times 3 $=____$	$2+2+2+2=____$ $____$ twos $=____$ $____$ times 2 $=____$
$4+4+4=____$ $____$ fours $=____$ $____$ times 4 $=____$	$5+5+5+5=____$ $____$ fives $=____$ $____$ times 5 $=____$

1 + 1 + 1 = ____ ____ ones = ____ ____ times 1 = ____	4 + 4 + 4 + 4 = ____ ____ fours = ____ ____ times 4 = ____
2 + 2 = ____ ____ twos = ____ ____ times 2 = ____	5 + 5 + 5 = ____ ____ fives = ____ ____ times 5 = ____
3 = ____ ____ three = ____ ____ times 3 = ____	6 + 6 + 6 = ____ ____ sixes = ____ ____ times 6 = ____
4 = ____ ____ four = ____ ____ times 4 = ____	7 + 7 = ____ ____ sevens = ____ ____ times 7 = ____
5 + 5 + 5 = ____ ____ fives = ____ ____ times 5 = ____	8 + 8 = ____ ____ eights = ____ ____ times 8 = ____



Bill has two sets of toys with two toys in each set. How many toys does he have? _____

Jane has three baskets of eggs with two eggs in each basket. How many eggs does she have all together? _____

John has four boxes of oranges with two oranges in each box. How many oranges does he have? _____

Mary has six pairs of shoes. How many shoes does she have all together? _____

John has three sets of toys with two toys in each set. How many toys does he have? _____

Mary has three baskets of eggs with four eggs in each basket. How many eggs does she have all together? _____

Susan has five pairs of shoes. How many shoes does she have all together? _____

John has four boxes of apples with three apples in each box. How many apples does he have all together? _____

Bill has two nickels. He can trade them for how many pennies? _____

2 times 3 = 3 + 3 = _____

4 times 2 = 2 + 2 + 2 + 2 = _____

3 times 3 = 3 + 3 + 3 = _____

5 times 2 = 2 + 2 + 2 + 2 + 2 = _____

2 times 6 = 6 + 6 = _____

2 times 7 = 7 + 7 = _____

4 times 1 = 1 + 1 + 1 + 1 = _____

Times = ×

2 times 3 = ____

2 × 3 = ____

4 times 2 = ____

4 × 2 = ____

5 times 1 = ____

5 × 1 = ____

4 × 3 = 3 + 3 + 3 + 3 = ____

5 × 2 = 2 + 2 + 2 + 2 + 2 = ____

2 × 7 = 7 + 7 = ____

3 × 6 = 6 + 6 + 6 = ____

2 × 9 = 9 + 9 = ____

4 × 4 = 4 + 4 + 4 + 4 = ____

There are _____ sets of things.

There are _____ things in each set.

There are _____ things all together.

3 times 2 = _____.

3 × 2 = _____

There are _____ sets of things.

There are _____ things in each set.

There are _____ things all together.

3 times 3 = _____.

3 × 3 = _____.

There are _____ sets.

There are _____ things in each set.

There are _____ things all together.

2 times 0 = _____.

2 × 0 = _____.

There is _____ set.

There are _____ things in the set.

There are _____ things all together.

1 times 0 = _____.

1 × 0 = _____

1 × 0 = _____	6 × 1 = _____	2 × 3 = _____
2 × 0 = _____	2 × 2 = _____	3 × 3 = _____
3 × 0 = _____	4 × 3 = _____	3 × 5 = _____
4 × 0 = _____	6 × 0 = _____	5 × 3 = _____
5 × 0 = _____	5 × 2 = _____	4 × 4 = _____

Any number times zero is _____.

The cup cakes in the store are sold only in packages of two.

Mrs. Jones buys 5 packages.
How many cup cakes does she get? $5 \times 2 = ____$

Joe buys 3 packages.
How many cup cakes does he get? $3 \times 2 = ____$

Pedro buys 4 packages.
How many cup cakes does he get? $4 \times 2 = ____$

Bill buys 0 packages.
How many cup cakes does he get? $0 \times 2 = ____$

Zero times any number is _____.

Watch for +, −, and ×.

$5 + 5 = ____$	$10 - 5 = ____$	$0 \times 1 = ____$
$8 + 9 = ____$	$12 - 8 = ____$	$0 \times 2 = ____$
$9 + 5 = ____$	$9 - 0 = ____$	$1 \times 3 = ____$
$7 + 8 = ____$	$15 - 4 = ____$	$0 \times 4 = ____$

Make a Multiplication Table

×	0	1	2	3	4	5	6	7	8	9	10
0	0										
1		1									
2											
3						15					

2 × 5 = ____	5 × 2 = ____	6 × 2 = ____
3 × 4 = ____	4 × 3 = ____	7 × 3 = ____
1 × 8 = ____	8 × 1 = ____	5 × 3 = ____
0 × 4 = ____	4 × 0 = ____	9 × 0 = ____

John has three sacks of marbles with four marbles in each sack. Jose has four sacks of marbles with three marbles in each sack. Do John and Jose have the same number of marbles? _____

Which is more money, three dimes or four nickels?

_____

Maria has five boxes of apples with three apples in each box. Sally has two boxes with six apples in each box. Which girl has more apples? _____

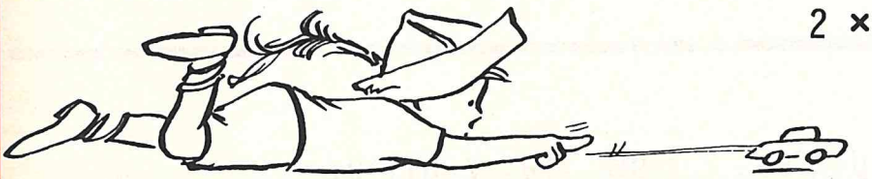
$4 \times 1 = ___$	$2 \times ___ = 4$
$5 \times 2 = ___$	$2 \times ___ = 10$
$2 \times 2 = ___$	$3 \times ___ = 6$
$3 \times 5 = ___$	$4 \times ___ = 8$
$4 \times 3 = ___$	$1 \times ___ = 3$
$3 \times 3 = ___$	$3 \times ___ = 9$
$5 \times 0 = ___$	$2 \times ___ = 6$
$5 \times 1 = ___$	$2 \times ___ = 12$
$1 \times 1 = ___$	$2 \times ___ = 0$
$0 \times 7 = ___$	$3 \times ___ = 12$

___ × 2 = 2	___ × 5 = 10
___ × 3 = 9	___ × 3 = 18
___ × 4 = 8	___ × 5 = 15
___ × 2 = 6	___ × 10 = 20
___ × 3 = 12	___ × 6 = 12
___ × 4 = 12	___ × 1 = 10
___ × 1 = 1	___ × 2 = 12
___ × 2 = 4	___ × 9 = 0
___ × 1 = 4	___ × 2 = 16
___ × 2 = 8	___ × 9 = 18

Find the number n

$2 \times 3 = n$	$2 \times n = 8$	$n \times 2 = 4$
$n = ____$	$n = ____$	$n = ____$
$3 \times 1 = n$	$3 \times n = 6$	$n \times 2 = 10$
$n = ____$	$n = ____$	$n = ____$
$6 \times 2 = n$	$2 \times n = 6$	$n \times 5 = 10$
$n = ____$	$n = ____$	$n = ____$
$3 \times 3 = n$	$2 \times n = 12$	$n \times 6 = 12$
$n = ____$	$n = ____$	$n = ____$
$1 \times 7 = n$	$3 \times n = 18$	$n \times 3 = 9$
$n = ____$	$n = ____$	$n = ____$
$0 \times 5 = n$	$4 \times n = 0$	$n \times 5 = 0$
$n = ____$	$n = ____$	$n = ____$
$7 \times 2 = n$	$2 \times n = 18$	$n \times 2 = 14$
$n = ____$	$n = ____$	$n = ____$
$3 \times 6 = n$	$2 \times n = 14$	$n \times 2 = 20$
$n = ____$	$n = ____$	$n = ____$

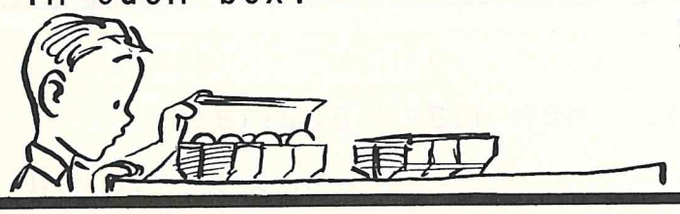
Bill has two sets of toy cars with the same number in each set. He has eight toy cars all together. How many are there in each set?



$2 \times n = 8$

$n = ____$

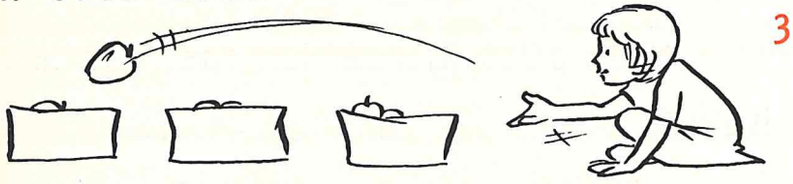
Tad has three boxes of eggs with the same number in each box. He has all together one dozen eggs. How many are there in each box?



$3 \times n = 12$

$n = ____$

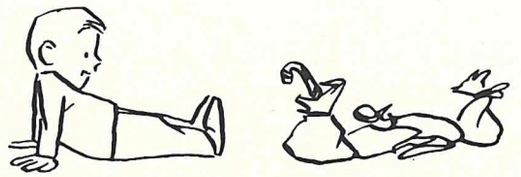
Sally has three boxes of apples with the same number in each box. She has fifteen apples. How many are there in each box?



$3 \times n = 15$

$n = ____$

Sam has four bags of candy with the same number of pieces in each bag. He has eight pieces all together. How many are there in each bag?



$4 \times n = 8$

$n = ____$

Maria has fifteen cents in nickels. How many nickels does she have?

$n \times 5 = 15$

$n = ____$

Joe has forty cents in dimes. How many dimes does he have?

$n \times 10 = 40$

$n = ____$

Trisha has 50¢ in quarters. How many quarters does she have?

$n \times 25 = 50$

$n = ____$

Betty has eighteen oranges. She puts three in each sack. How many sacks does she have?

$n \times 3 = 18$

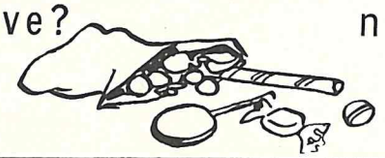
$n = ____$

Mac has eighteen pieces of candy. He gives two pieces to each child at the party. How many children are at the party?

$n \times 2 = 18$

$n = ____$

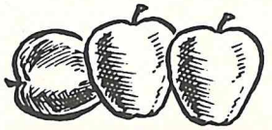
Marcia has fourteen pieces of candy. She gives two pieces to each of her cousins. There is none left. How many cousins does she have?



$n \times 2 = 14$

$n = ___$

John has twelve apples. He puts three in each sack. How many sacks are there?



$n \times 3 = 12$

$n = ___$

Dolly has twenty cents. She spends it all on candy, paying two cents for each piece. How many pieces does she get?

$2 \times n = 20$

$n = ___$

Mary has sixteen oranges. She gives two to each child at the party. How many children are at the party?

$n \times 2 = 16$

$n = ___$

$n \times 3 = 18$ $n = ___$	$2 \times n = 20$ $n = ___$	$4 \times n = 8$ $n = ___$
$n \times 6 = 0$ $n = ___$	$3 \times n = 15$ $n = ___$	$4 \times n = 12$ $n = ___$

Even and Odd Numbers

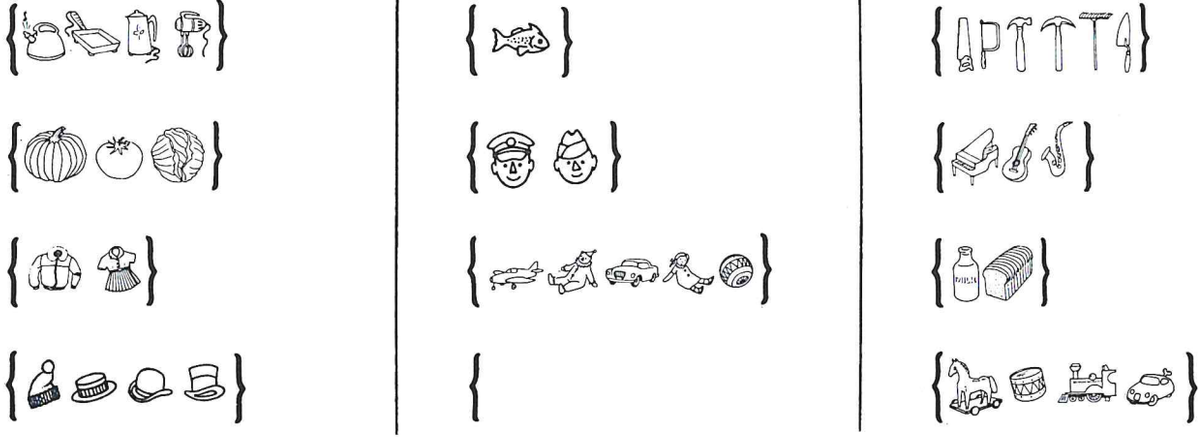
John has six pieces of candy. He wants to give them to Mary and Susan. If he is fair, how many does he give to each? _____

Bill has eight apples. He divides them between Joe and Tom. How many does he give to each? _____

Walt divides his pile of candy into two equal parts. Each part has five pieces. How many pieces are there all together? _____

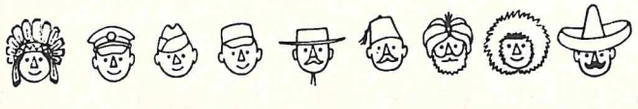
The number of things in a set is <u>even</u> if we can divide the set into two equal parts.

Draw a line around each set with an even number of things in it.



Even: 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, ____

Odd: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, ____

N{  }

☐ even

☐ odd

{1, 17, 4, 8, 11, 15, 6, 2, 10}

The set of even numbers = _____

The set of odd numbers = _____

Give a pair of odd numbers whose sum is four.

____ + ____ = 4

Give a pair of even numbers whose sum is eight.	Give a pair of odd numbers whose sum is eight.
____ + ____ = 8	____ + ____ = 8
What is the next odd number?	What is the next even number?
5 ____, 13 ____, 3 ____	4 ____, 12 ____, 18 ____

Give two pairs of even numbers whose sum is ten.

____ + ____ = 10 ____ + ____ = 10

If n is an odd number then n + 1 is an _____ number.

The set of even numbers greater than three and less than twelve is _____

The set of all numbers n such that n is odd, $2 < n$ and $n < 6$ is _____

The set of odd numbers greater than six and less than fourteen is _____

The set of all numbers n such that n is even, $10 < n$ and $n < 20$ is _____

$\{n: n \text{ is odd and } 20 < n < 30\} =$ _____

$\{n: n \text{ is even and } 20 < n < 30\} =$ _____

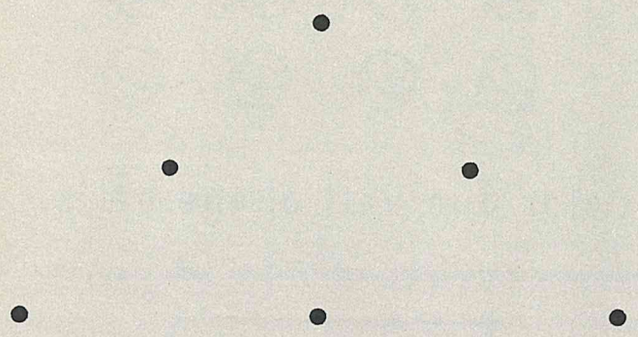
$\{n: n \text{ is odd and } 2 < n < 8\} =$ _____

$\{n: n \text{ is even and } 1 < n < 9\} =$ _____

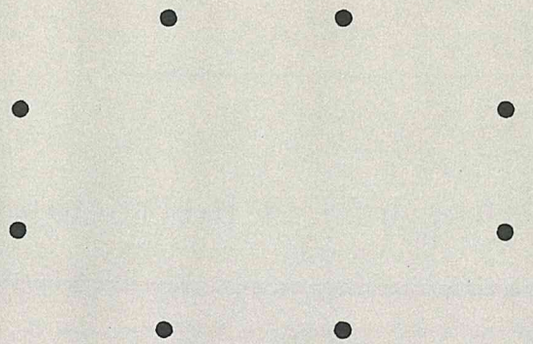
$\{n: 4 < n < 8 \text{ and } n \text{ is odd}\} =$ _____

$\{n: 3 < n < 11 \text{ and } n \text{ is even}\} =$ _____

Use four of the points to draw a square.



Use five of the points to draw a pentagon.



Draw a concave quadrilateral.

Connect points A, B, C, and D in all ways.

D• •C

A• •B

How many line segments did you draw? _____

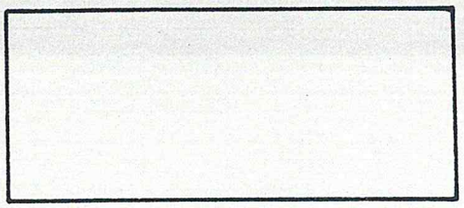
$\{m: 498 < m < 501\} = \{$ _____ $\}$

$\{6, 8, 10\} \cup \{9, 11\} =$ _____

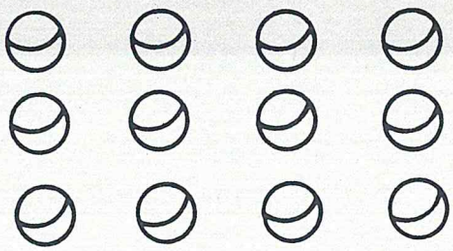
$\{10, 20, 30, 40\} - \{10, 20\} =$ _____

$\{408, 509, 630, 721\} -$ _____ $= \{408, 630, 721\}$

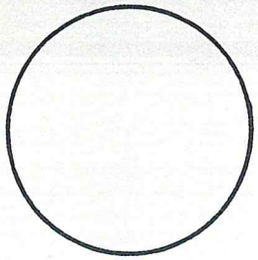
Review



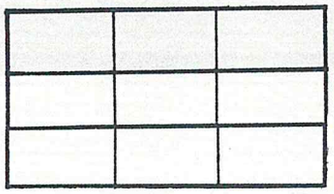
Color one half of the rectangle.



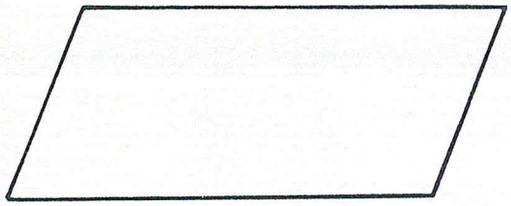
Color one half of the balls.



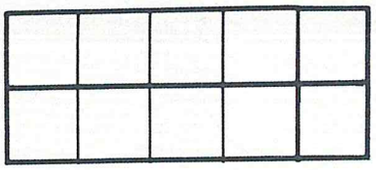
Color one fourth of the circle.



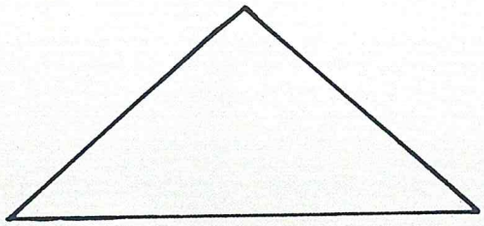
Color one third of the rectangles.



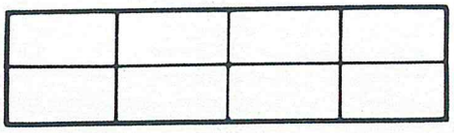
Color one third of the quadrilateral.



Color one half of the squares.



Color one half of the triangle.



Color one fourth of the rectangles.

Review

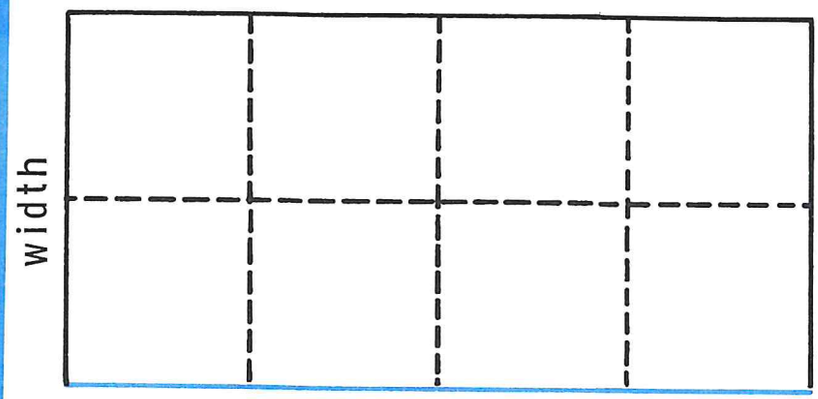
354 + 452	293 + 431	674 + 233	189 + 730	277 + 342	316 + 192
255 + 135	647 + 138	189 + 102	366 + 227	405 + 505	617 + 235
68 − 19	74 − 27	57 − 38	42 − 33	83 − 25	94 − 49
14 5 6	16 3 7	13 8 2	12 7 7	11 8 9	17 4 3

Jack's father drove 453 miles on Saturday, and 339 miles on Sunday. How far did he drive during the two days? _____

How much farther did he drive on Saturday than on Sunday? _____

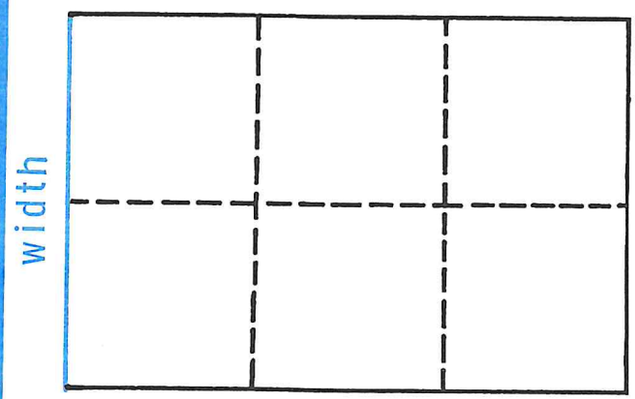
Joan has 93¢ and Trisha has 67¢. How much more does Joan have? _____

Part 19 · Area



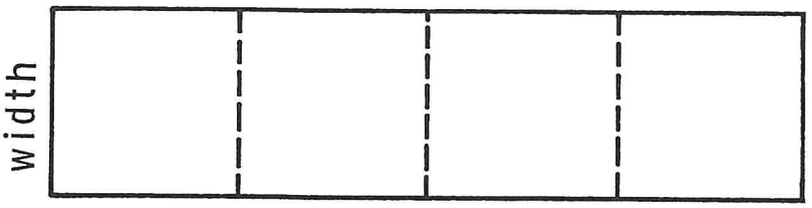
length = 4 units.

width = ___ units.



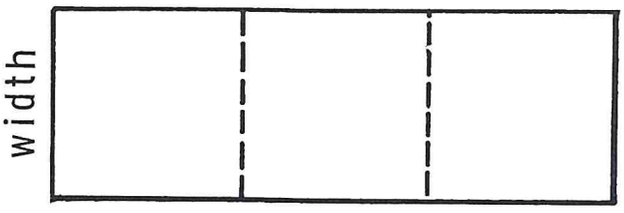
length = ___ units.

width = 2 units.



length = ___ units

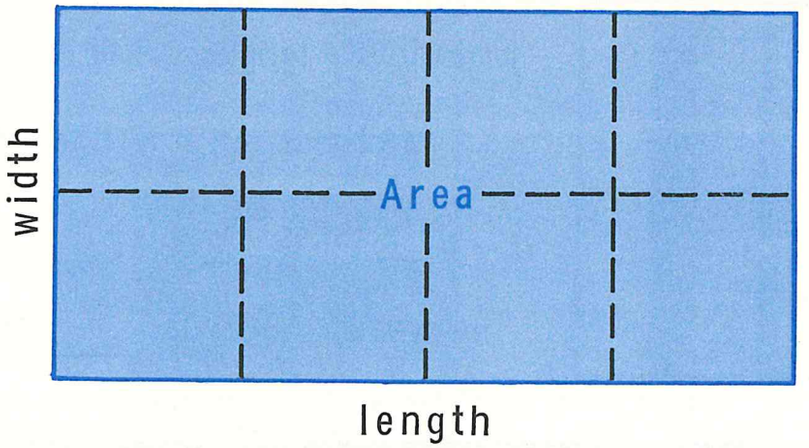
width = ___ units



length = ___ units.

width = ___ units.

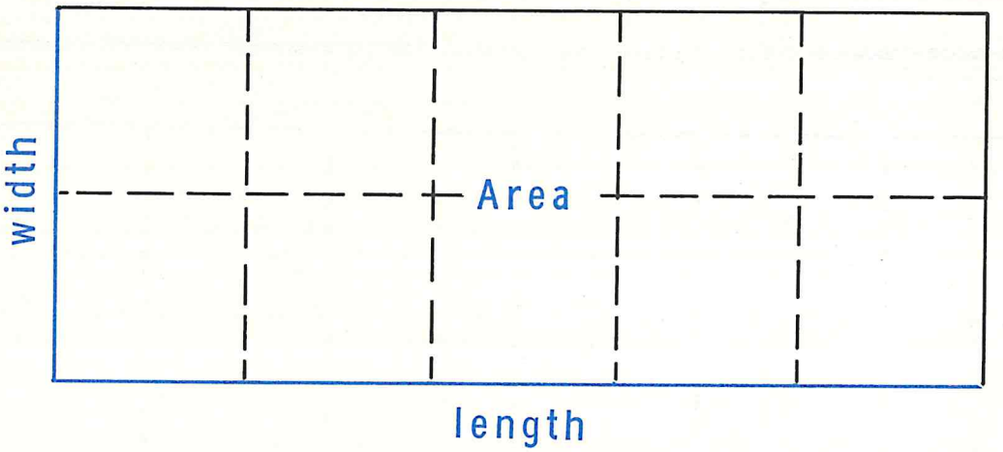
Area



Width times length = area.

2 times 4 = 8

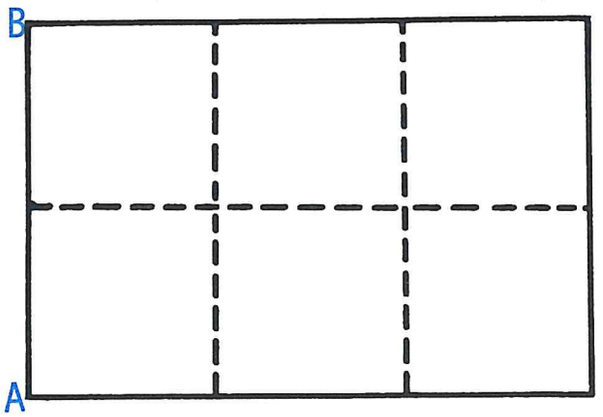
The area of the rectangle is 8 square units.



Width times length = area.

___ times ___ = ___

The area of the rectangle is ___ square units.

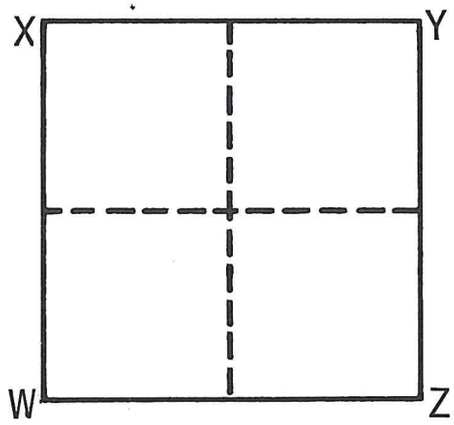


width times length = area

AB times AD = the area of the rectangle.

___ times ___ = ___

The area of ABCD is ____ square units.

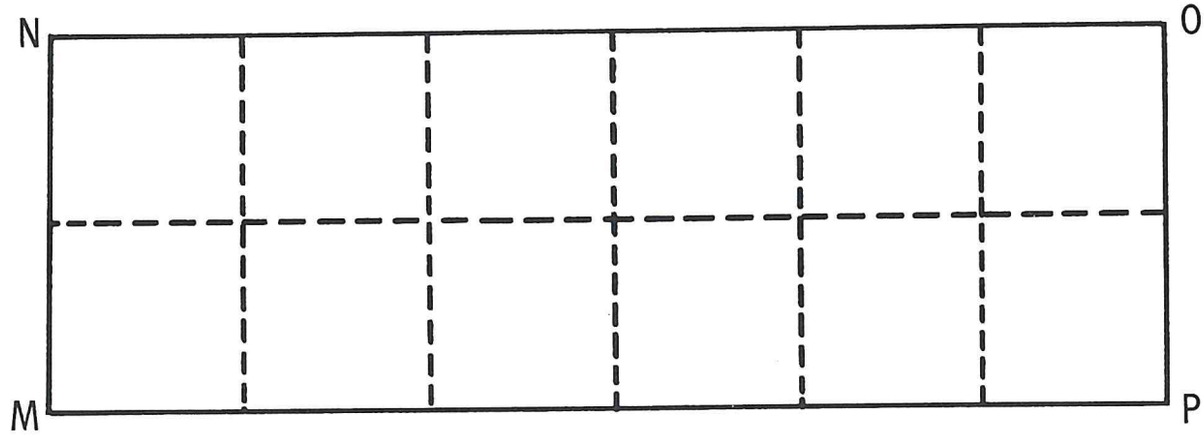


width times length = area

WX times WZ = the area of the square.

___ times ___ = ____

The area of WXYZ is ____ square units.

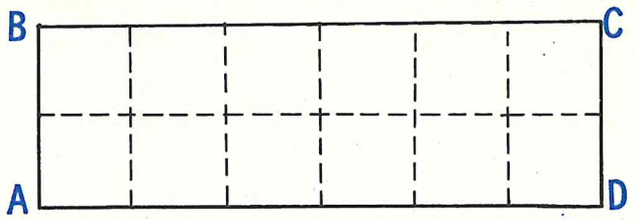


width times length = area

MN times MP = the area of the rectangle.

___ times ___ = ____

The area of MNOP is ____ square units.



Color the rectangle ABCD.

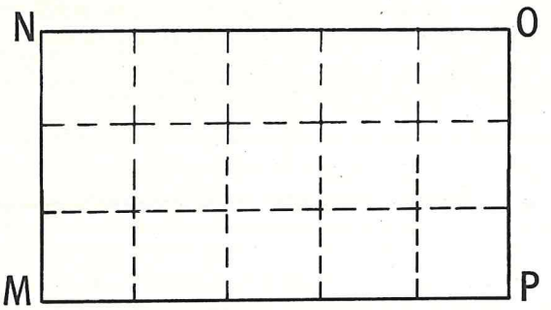
AB is ____ units.

AD is ____ units.

AB times AD = the area of ABCD.

___ times ___ = ____.

The area of ABCD is ____ square units.



Color the rectangle MNOP.

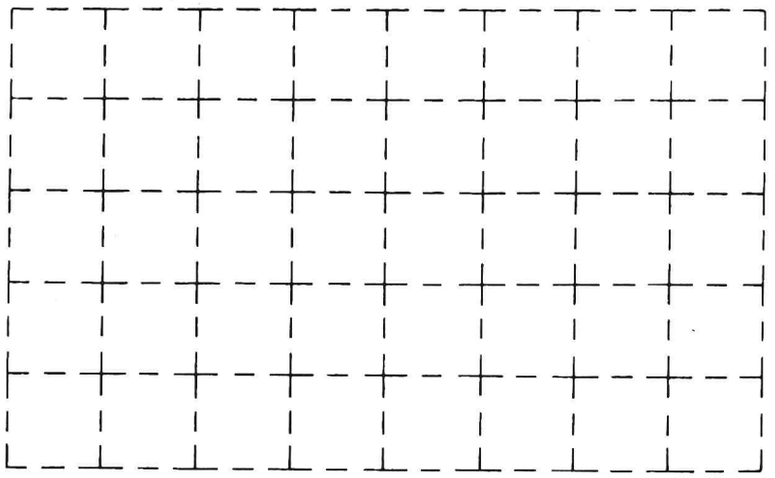
MN is ____ units.

MP is ____ units.

MN times MP = the area of MNOP.

___ times ___ = ____.

The area of MNOP is ____ square units.



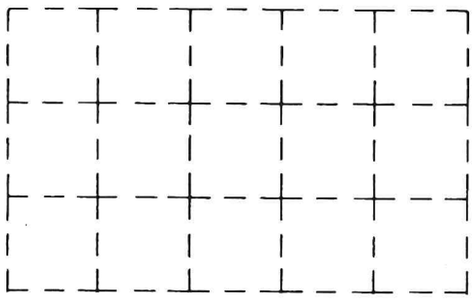
Color on the grid a rectangle whose width is 3 units and whose length is 5 units.

3 times 5 = ____

What is the area of this rectangle? _____

Color on the grid a square whose area is 9 square units. Each side of the square is ___ units.

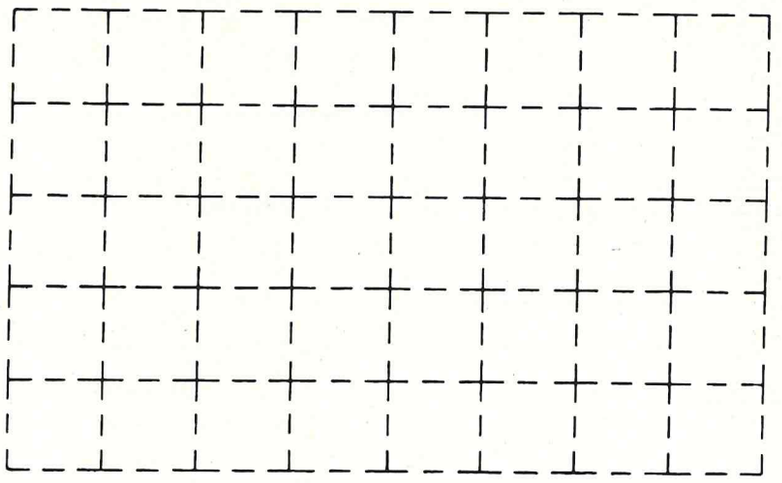
___ times ___ = 9



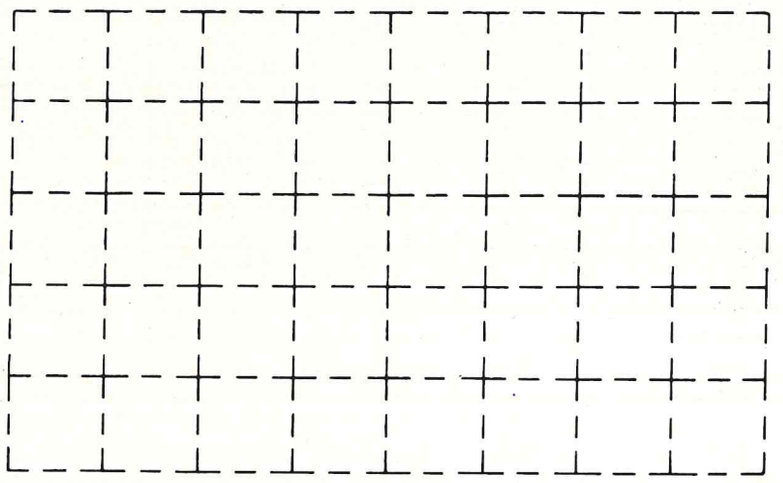
Color on the grid a rectangle whose area is ten square units.

The width of the rectangle is _____ units.

The length of the rectangle is _____ units.



Color on the grid a square whose area is sixteen square units.



Color on the grid a rectangle whose **width** is two units and whose **area** is ten square units.

The length of the rectangle is ____ units.

Color on the grid a square whose area is nine square units.

The sides of the square are each ____ units long.

Review

Watch for + , - and ×

9 + 9 =	9 + ___ = 17	___ + 6 = 13
11 - 7 =	8 + ___ = 12	___ + 9 = 17
3 × 4 =	12 - ___ = 9	___ × 2 = 12
6 × 2 =	15 - ___ = 6	___ × 3 = 9
18 - 7 =	4 × ___ = 12	___ - 6 = 6
8 + 7 =	3 × ___ = 9	___ - 9 = 9
12 - 4 =	20 - ___ = 10	___ + 7 = 12
5 × 3 =	40 - ___ = 20	___ + 14 = 18
4 × 4 =	30 + ___ = 60	___ × 2 = 10
14 - 9 =	60 + ___ = 100	___ × 4 = 20
16 - 7 =	2 × ___ = 10	___ - 9 = 0
13 - 5 =	4 × ___ = 8	___ - 12 = 4
6 + 7 =	15 - ___ = 12	___ + 9 = 18
8 + 11 =	17 - ___ = 8	___ + 3 = 14
10 + 10 =	13 + ___ = 19	___ × 10 = 20
18 + 2 =	17 + ___ = 17	___ × 9 = 9
11 - 4 =	5 × ___ = 0	___ - 50 = 50
15 - 6 =	3 × ___ = 15	___ + 50 = 50
2 × 5 =	13 - ___ = 13	___ × 50 = 0

Review

$\{1, 3\} - ____ = \{1\}$

$\{2, 4, 6\} - ____ = \{2\}$

$\{2, 4, 8\} - ____ = \{2, 4, 8\}$

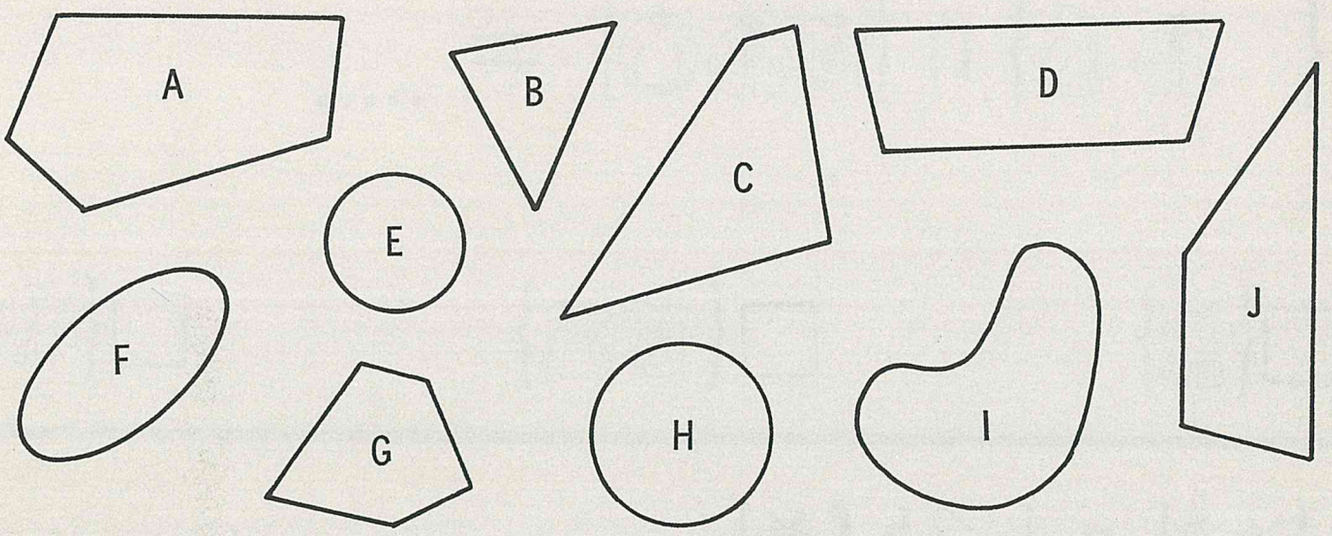
$\{1, 7, 12\} - ____ = \{1, 7\}$

$\{1, 2\} - ____ \subset \{1, 3\}$

$\{4, 5, 7\} - ____ \subset \{3, 5\}$

$\{1, 7, 8\} - ____ \subset \{1, 7, 8\}$

$\{4, 7, 9\} - ____ \subset \{1\}$



The set of circles = _____

The set of quadrilaterals = _____

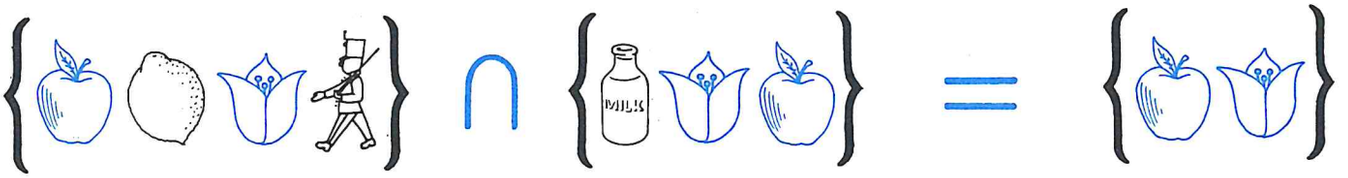
The set of pentagons = _____

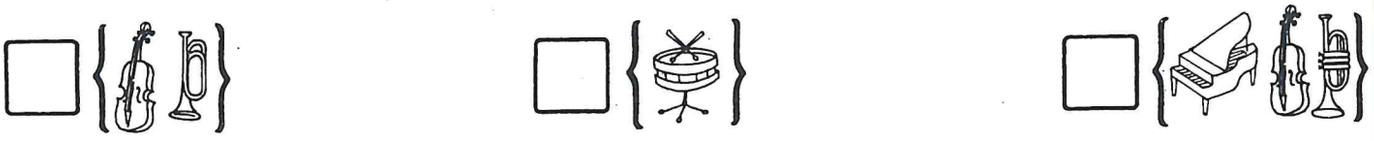
The set of all y's such that $1 < y$ and $y < 4$ is the set _____.

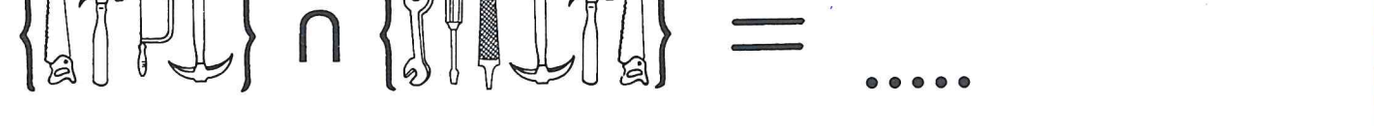
$\{y: 5 < y \text{ and } y < 9\} =$ _____

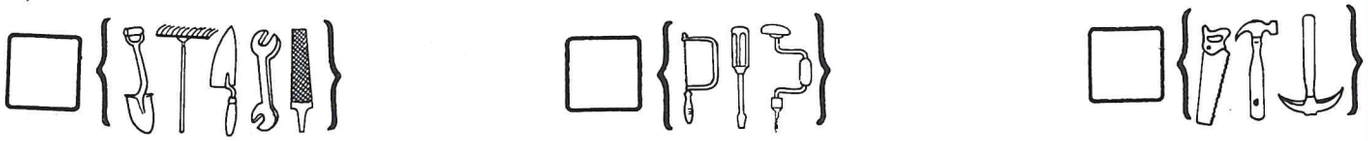
$\{y: 31 < y < 35\} =$ _____

$\{n: 749 < n < 753\} =$ _____









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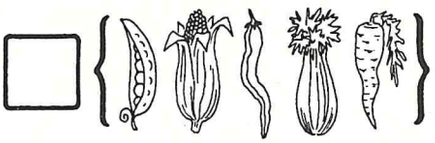
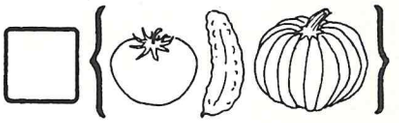
☐{ } ☐  ☐ 

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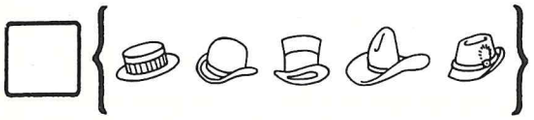
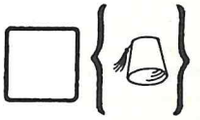
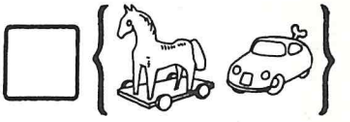
☐  ☐{ } ☐ 

{ } ∩ = ...

☐ ☐{ } ☐ 

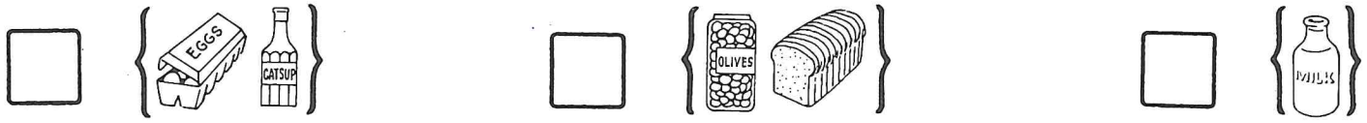
{Jane, Nan, Bill} ∩ {Dick, Bill, Sue} = ...

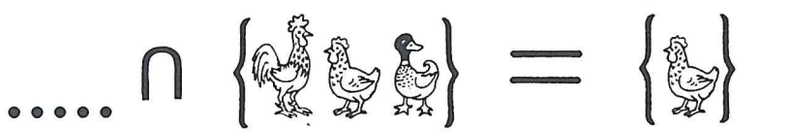
☐{Bill} ☐{Nan, Sue, Jane} ☐{Bill, Dick}

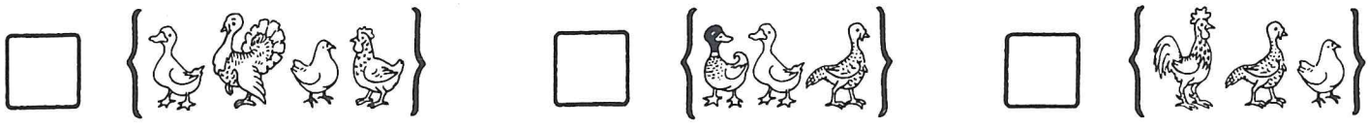
{3, 6, 9} ∩ {1, 2, 3, 4, 5, 6} = ...

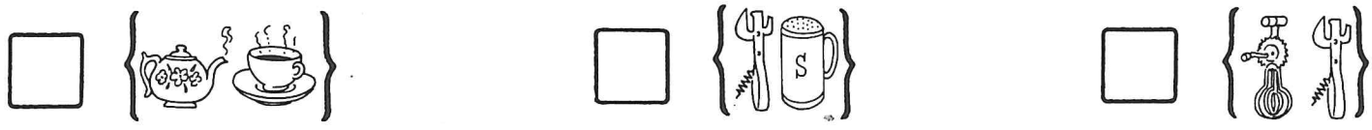
☐{4, 5, 6} ☐{3, 6} ☐{1, 7, 9}

EGGS
CATSUP


EGGS
CATSUP
OLIVES
MILK



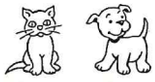




$\{3, 4\} \cap \{1, 3, 5\} \cap \{2, 3\} = \ldots\ldots$

☐ $\{1, 2, 5\}$ ☐ $\{3\}$ ☐ $\{4, 5, 1\}$

$\{$ $\} \cap \{\ \} \cap \{$ $\} = \ldots\ldots$

☐ $\{$  $\}$ ☐ $\{$ $\}$ ☐ $\{\ \}$

$\{\text{Fred, Don}\} \cap \ldots\ldots \cap \{\text{Sue, Joe, Fred}\} = \{\text{Fred}\}$

☐ $\{\text{Sue, Joe}\}$ ☐ $\{\text{Fred, Judy}\}$ ☐ $\{\text{Don, Joe}\}$

$\{106, 99, \text{Dave}\} \cap \{109, \text{Dave}, 29\} \cap \{19, \text{Dave}\} = \ldots\ldots$

☐ $\{\text{Dave}\}$ ☐ $\{106, 99, 19\}$ ☐ $\{\ \}$

$\{36, 10, 26\} \cap \{5, 9, 39, 26\} \cap \ldots\ldots = \{26\}$

☐ $\{10, 5\}$ ☐ $\{25, 26, 27\}$ ☐ $\{4, 6, 7, 8\}$

$\{1, 2, 3\} \cap \{1, 2\} = \{1, 2\}$

$\{2, 4, 6, 8\} \cap \{1, 2, 3, 4\} =$ _____

$\{\text{Dave, Tom, Chris}\} \cap \{\text{Dave, Joe}\} =$ _____

$\{101, 201, 301\} \cap \{110, 201, 300\} =$ _____

$\{4, 8, 12, 16, 20\} \cap$ _____ $= \{\ \}$

$\{1, 2, 3, 4, 5, 6, 7, 8\} \cap \{11, 9, 7, 5, 3\} =$ _____

_____ $\cap \{\text{Jean, 12, 42, Betty}\} = \{12, 42\}$

$\{n: n < 3\} \cap \{n: n < 2\} =$

$\{0, 1, 2\} \cap \{0, 1\} = \{0, 1\}$

$\{n: n < 4\} \cap \{n: n < 6\} =$

$\{\quad\} \cap \{\quad\} = \{\quad\}$

$\{n: 0 < n < 3\} \cap \{n: 4 < n < 6\} =$

$\{\quad\} \cap \{\quad\} = \{\quad\}$

$\{n: 16 < n < 21\} \cap \{18, 20\} =$

$=$

$\{n: 6 < n < 9\} \cap \{n: n < 10 \text{ and } n \text{ is odd}\} =$

$=$

$\{n: n < 4 + 1\} \cap \{n: n < 3\} =$

$=$

$\{n: 499 < n < 502\} \cap \{n: 500 < n < 504\} =$

$=$

one dozen = 12

12 apples = one dozen apples

18 apples = ____ dozen and ____ apples

21 apples = ____ dozen and ____ apples

19 apples = ____ dozen and ____ apples

24 apples = ____ dozen and ____ apples

16 = 12 + ____

16 apples are equal to ____ dozen plus ____.

13 = 12 + ____

13 eggs are equal to ____ dozen plus ____.

15 = 12 + ____

15 apples are equal to ____ dozen plus ____

10 eggs + 5 eggs are ____ dozen plus ____.

9 eggs + 6 eggs are ____ dozen plus ____.

11 apples + 5 apples are ____ dozen plus ____.

10 apples + 3 apples are ____ dozen plus ____.

16 apples are ..... one dozen apples.

☐ less than ☐ equal to ☐ more than

7 apples are ..... one dozen apples.

☐ less than ☐ equal to ☐ more than

12 apples are ..... one dozen apples.

☐ less than ☐ equal to ☐ more than

2 pints are equal to 1 quart.

2 pints = 1 quart

---

2 cups are equal to 1 pint

2 cups = 1 pint

4 pints = ___ quarts	4 cups = ___ pints
6 pints = ___ quarts	6 cups = ___ pints
2 pints = ___ quart	2 cups = ___ pint

---

3 pints are ..... 1 quart.

☐ less than ☐ equal to ☐ more than

---

1 cup is ..... 2 pints.

☐ less than ☐ equal to ☐ more than

---

2 cups are ..... 1 quart.

☐ less than ☐ equal to ☐ more than

How much ?

3 inches

____ inch

____ inches

____ inches

____ inches

____ inches

____ inches

____ inches

12 inches = 1 foot

12 inches = 1 foot and 0 inches

18 inches = ___ foot and ___ inches

13 inches = ___ foot and ___ inches

17 inches = ___ foot and ___ inches

---

1 foot is ..... 15 inches.

☐ less than ☐ equal to ☐ more than

---

5 inches + 7 inches are ..... 1 foot.

☐ less than ☐ equal to ☐ more than

---

10 inches are ..... 1 foot.

☐ less than ☐ equal to ☐ more than

12 inches are equal to ___ foot and ___ inches.

17 inches are equal to ___ foot and ___ inches.

15 inches are equal to ___ foot and ___ inches.

16 inches are equal to ___ foot and ___ inches.

7 inches + 6 inches are equal to ___ foot and ___ inches.

5 inches + 8 inches are equal to ___ foot and ___ inches.

10 inches + 4 inches are equal to ___ foot and ___ inches.

9 inches + 7 inches are equal to ___ foot and ___ inches.

11 inches + 6 inches are equal to ___ foot and ___ inches.

8 inches + 7 inches are equal to ___ foot and ___ inches.

a half dollar = 50¢

2 quarters = a half dollar

5 dimes = a half dollar

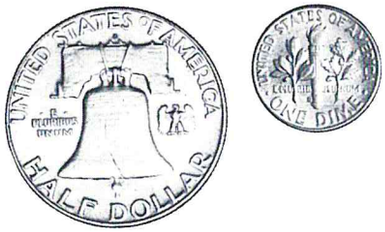
2 half dollars = a dollar

____ cents

____ cents

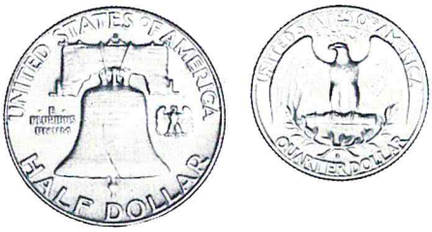
____ cents

____ cents



____ cents

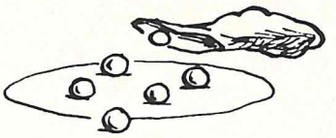
____ cents



____ cents

____ cents

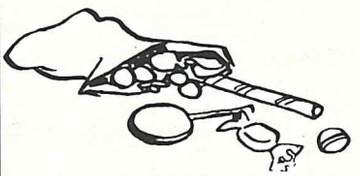
Draw a line to the right amount of money.



27 cents

51 cents

60 cents



35 cents

40 cents

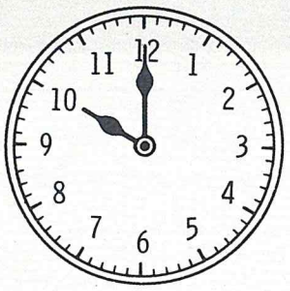
1 dollar = _____ half dollars or _____ quarters

2 dollars = _____ half dollars or _____ quarters

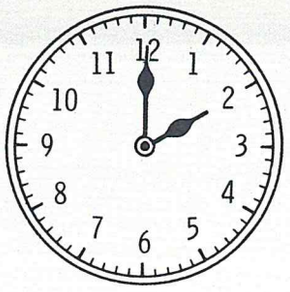
1 half dollar = _____ quarters or _____ dimes

2 half dollars = _____ dollar or _____ quarters

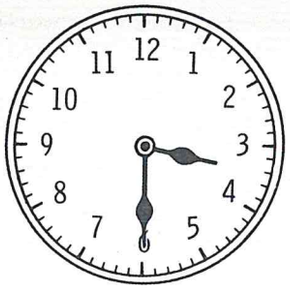
Review



____ o'clock



____ o'clock



____ o'clock

____ o'clock

____ cents

____ cents

____ cents

Review

..... ∪ { } = { }

□{ } □{ } □{ }

_____ ∪ {3, 5, 7} = {1, 3, 5, 7, 12}

N{ } + ___ = 12

N{ } + ___ = 18

N{ } + ___ = 16

15 − ___ = N{ }

17 − ___ = N{ }

13 − ___ = N{ }

Review

$60 + n = 100$ $n =$ ___	$m - 100 = 200$ $m =$ ___
$n + 70 = 100$ $n =$ ___	$m - 20 = 80$ $m =$ ___
$3 +$ ___ $= 5 + 4$ $6 +$ ___ $= 7 + 3$	___ $+ 2 = 9 + 3$ ___ $+ 4 = 7 + 6$

Count by threes

30	33									

Count by fours

40	44									

{June, March, May} − _____ = {June, May}

{15, 20, 25, 30} − _____ = {15, 20}

Review

$3 + ____ = 4 - 1$	$____ + 5 = 10 - 5$
$6 + ____ = 10 - 3$	$____ + 2 = 12 - 6$
$m + n = 7$ $n = 3$ $m = ____$	$m + n = 11$ $m = 6$ $n = ____$
$m - n = 4$ $m = 6$ $n = ____$	$m - n = 7$ $m = 10$ $n = ____$

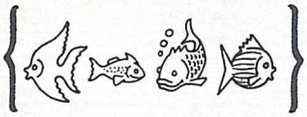
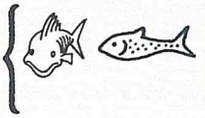
$\{$ $\}$ $\cup$ ..... $\subset$ $\{$ $\}$

☐ $\{$ $\}$ ☐ $\{$ $\}$ ☐ $\{$ $\}$

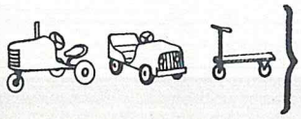
$\{1, 3, 5\} \cup \{11, 19\} \subset _____$

$\{101, 102, 204\} - _____ \subset \{101\}$

Review

$N\{$  $\} + N\{$  $\} <$ .....

- ☐ 4
- ☐ 6
- ☐ 8

$N\{$  $\} + N\{$ $\} <$ ____

$200 + 40 + 3 <$ .....

- ☐ 200
- ☐ 240
- ☐ 260

The set of numbers greater than eleven and less than sixteen is _____

The set of all n's such that $398 < n$ and $n < 400$ is

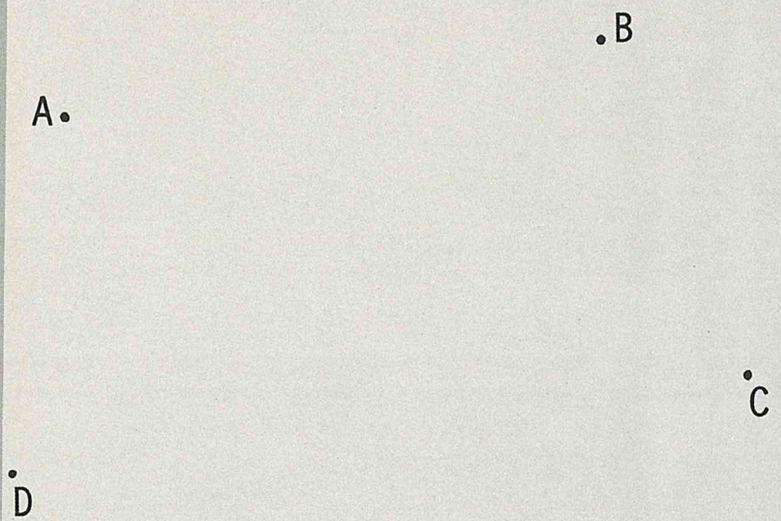
_____

$\{n: 969 < n < 972\} =$ _____

$\{n: 340 < n < 341\} =$ _____

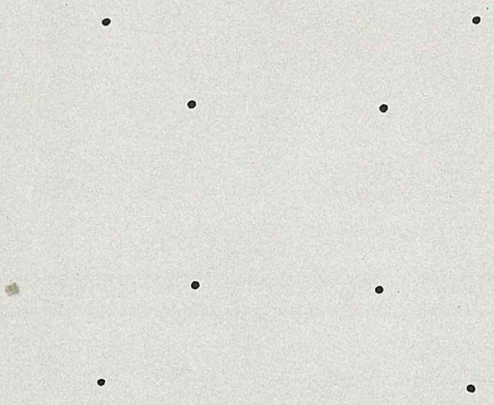
$\{n:$ n is odd and $12 < n < 20\} =$ _____

Draw quadrilateral ABCD



The perimeter of ABCD is _____ in.

Use four of the points to draw a square.



The perimeter of your square is _____ in.

Beth has three dolls. Marcia and Beth together have seven dolls. Joy and Marcia together have eight dolls. How many dolls does each girl have?

$b =$ _____

$m + b =$ _____

$m =$ _____

$j + m =$ _____

$j =$ _____

Will has three sets of toy cars with the same number in each set. He has twenty-seven toy cars all together. How many are there in each set?

$3 \times n =$ _____

$n =$ _____

Review

199 + 390	246 + 472	550 + 275	444 + 195	728 + 181	673 + 291
357 + 128	276 + 315	185 + 365	427 + 348	265 + 405	282 + 109
76 − 17	42 − 16	63 − 29	27 − 18	33 − 15	54 − 37

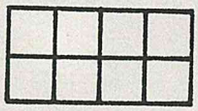
Jim's father drove 361 miles on Thursday, and 496 miles the next day. How far did he drive in the two days? How much farther did he drive on the second day than the first? _____

Sarah saves 84¢ and Maria saves 49¢. How much more has Sarah saved than Maria? _____

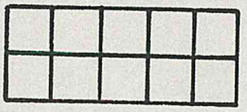
Peter buys eight pieces of candy, and each piece costs three cents. How much does he spend? _____

Maurice buys nine pieces of chocolate, and each piece costs two cents. How much does he spend? _____

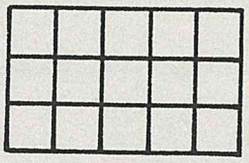
Width × length = area



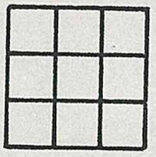
2 × 4 = 8



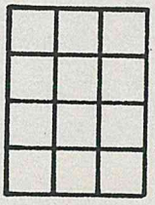
___ × ___ = ___



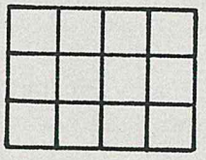
___ × ___ = ___



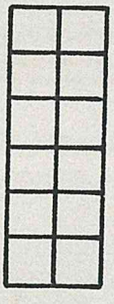
___ × ___ = ___



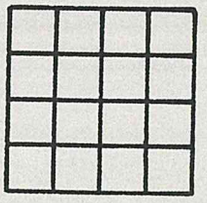
___ × ___ = ___



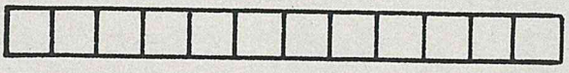
___ × ___ = ___



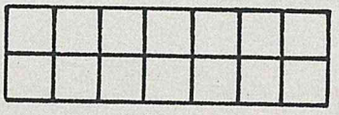
___ × ___ = ___



___ × ___ = ___



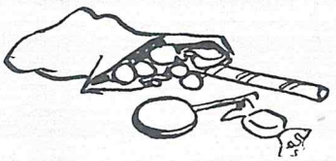
___ × ___ = ___



___ × ___ = ___

Review

Joe has a dozen pieces of candy. He gives one piece to Bill and one to Sam. He then gives the rest away by giving two pieces to each of his sisters. How many sisters does he have? _____



Bill has forty cents in change. He has one quarter and the rest is in nickels. How many nickels does he have? _____

Mary has twice as many dolls as Jane. Sue has one third as many as Mary. Mary has six dolls. How many does Jane have? _____ How many does Sue have? _____

Bill has twice as many apples as Joe. Sam has one fourth as many as Bill, and Tom has one third as many as Bill. Bill has a dozen apples.

How many does Joe have? _____

How many does Sam have? _____

How many does Tom have? _____

Joe has eight cents. Mary has half as much. Sue has three times as much money as Mary. Tom has one fourth as much as Sue. How much does Mary have? _____ Sue? _____ Tom? _____

This book belongs to:

RANDOM HOUSE/SINGER

72121